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itm UNIVERSITY
INDEPENDENT · INNOVATIVE · INSPIRING

VectorTech

Magnitude & Direction

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All information issued under authority of Chancellor

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VISION:

To build an unaided, self-financed university, committed to delivering education of internationally recognized standards, a university that would go on to serve as an intellectual resource base in India and the subcontinent.

MISSION:

To provide rigorous, high quality and relevant education in India, designed to meet national needs and international standards, so that the student community would have an alternative to seeking such education in a foreign country, at a significantly lower cost.

To develop well-rounded and professional graduates with a breadth of knowledge and the capability for analytical thinking, who are committed to excellence in their personal and professional endeavours, and who have the vision, courage and dedication to operate successfully in a dynamic market and technology-driven global environment.

To establish close ties with the corporate community and academicians of national and international repute. This will act as a rich resource of advice and information and shall help in keeping the curriculum relevant to the needs of business.

To facilitate lifelong learning.

CORE VALUES:

Integrity – To be honest, fair, impartial and unbiased in our dealings both within and on behalf of ITM University.

Excellence – To perform all duties to foster a culture of excellence and high quality in all we do.

Dedication – Dedicate ourselves to learning and teaching and to attain knowledge, professional competence, focus on excellence, and contribute to research, innovation and entrepreneurship.

Accountability – We firmly believe that education in the form of scholarship, research, teaching, service and developing others is a public trust. We will live up to this trust through safeguarding our resources and being good stewards of the human, intellectual, physical and fiscal resources given to our care.

Respect – We recognize the inherent dignity and rights of every person, and we will do our utmost to fulfil our resulting responsibility to treat each person with fairness, compassion and decency.

QUALITY POLICY:

To impart learning of the highest standards, in the disciplines we have chosen through a blend of theory, practice and performance. We endeavour to seek excellence in our academic activities and in all the services we provide to improve the quality of life of our students and the community we serve.

Editorial

It is our privilege to give you an insight into the portals of ITM University, which is achieving new heights each year. These achievements have been possible under the exemplary guidance of the members of the Governing Body, the Vice-Chancellor and Professor of Eminence, Professor Prem Vrat, and the dedicated faculty, staff and students of ITMU. We believe that in order to achieve a lot, it is prudent to believe in your potential. These achievements remind us of a famous saying by Ronald E. Osborne:

Unless you try to do something beyond what you have already mastered, you will never grow.

And when you try to do something big or great, keep the following in mind:

You can't depend on your eyes when your imagination is out of focus.

- Mark Twain

So, keep your focus on the focus, if you want to really grow.

Through this edition of VectorTech, we have encouraged flair for writing among faculty as well as students. Since ITMU consists of three schools, namely, engineering, law and management, we have included articles from these three core areas. We hope that reading this edition would be a learning and enjoyable experience for you.

Warm regards

Editorial Team :
Col (Retd) J R Sharma
Deeksha T Madan
Dr Payal Khurana

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N K Dewan
Chancellor, ITM University

Message from the Chancellor

ITM University is among India's foremost independent multidisciplinary universities. It was established in 1996 as an affiliated engineering college. In recognition of its performance and its potential for excellence, it was the first affiliated college of the university to be upgraded to the status of an autonomous institution. Within a year thereafter, it became Haryana's first independent multidisciplinary university, offering undergraduate and postgraduate degrees in Engineering, Management and Law.

ITMU is sustained by shared values; a commitment to the common purpose of building an institution through study, teaching and flexibility; that delivers consistently on high-quality education to its students in the area chosen; an institution that creates a wealth of knowledge and expertise for the progress of commerce and industry and the welfare of our community at large.

I am confident that with such a wealth of intellectual resources, we will be able to contribute very significantly towards the advancement of knowledge in India and around the globe.

In our pursuit to accomplish our vision and mission, we are prepared to contribute substantially for the betterment of the academic scenario in India. We strongly believe that education is an effective medium of social transformation. We are also encouraged when we see that our students passing out from the university are not only realizing their ambitions but also turning out as well groomed and responsible citizens. We are proud to have founded a university based on global best practices, which shall help to shape modern India.

I extend my best wishes to all staff and students of ITM University and wish them the best of luck in their endeavours.

We are also encouraged when we see that our students passing out from the university are not only realizing their ambitions but also turning out as well groomed and responsible citizens.

Professor Prem Vrat
Vice Chancellor &
Professor of Eminence
ITM University

Message from the Vice Chancellor

ITM University's vision and philosophy is reflected in its logo with the keywords - **independent, innovative and inspiring**. In keeping with this, ITM University is committed to academic excellence and putting in place all the academic enablers that will provide value to our students, encouraging them to contribute to society. The university has excellent academic infrastructure, talented faculty and staff, quality focused decision-making systems in place, and value-orientation in the teaching-learning process.

We are consistently working to realign the university's activities with its mission, instituting internal controls, improving, and in some cases totally revamping our teaching—learning processes, thus creating competencies and values for the students and stakeholders and providing a robust foundation for our growth. As a result, our industry—academia co-operation, national and international collaborations, our programmes, course structures, pedagogy, value-added skill courses, industry projects, research and development, all stand on a sound footing—indeed a remarkable measure of our sustained consolidation process.

The members of our faculty also have excellent credentials and distinguished achievements in research. We are building an international network of partner institutions to support our development in the area of research. The network is creating exciting opportunities for our staff and students to live, work, study and research across the globe. This will help to ensure the ongoing relevance of our academic programmes and the continued excellence of our teaching, learning and research.

In recognition of its excellent track record, ITM University has been consistently ranked year after year, amongst the top private engineering colleges and universities of the country by independent national survey agencies, such as the Outlook Survey 2012, which ranked ITM University as No. 1 in Haryana and the No. 1 Private University in the NCR (National Capital Region). We have also recently been accredited in the category of 'Premier University' by the Accreditation Service for International Colleges (ASIC), UK which is a mark of our global recognition status.

"We are building an international network of partner institutions to support our development in the area of research"

Feedback

Impression of the Distinguished Visitors

It was an honour and pleasure to be the Chief Guest. I am hugely impressed by the strides that the University has made in such a short space of time. It is institutions like ITM University on which India will build its future.

My Best Wishes

Mr Vikram Singh Mehta
Chairman, Shell Companies India
31 March 2012

Accreditation Services for International Colleges (ASIC), UK Commendations during ASIC accreditation of ITM University *:-*

'There are clear and effective structures underpinning academic management.'

'There is high quality, comprehensive, course-specific and generic information supplied to students.'

'A wide range of appropriate pedagogic methods are used.'

'There are records relating to the significant and continuing development of new course elements.'

'There is an ample recorded evidence of successful progression from ITMU's programmes.'

'There is a fully developed system for measuring trends and making coherent analysis, and for acting upon the outcomes.'

'The University provides its own good quality hostel accommodation and its own bus transportation between hostels and the campus.'

'There are comprehensive written systems for the conduct of examinations and the secure storage of assessment materials.'

Chief Executive ASIC
18 April, 2012

'What ITM University has achieved in relatively few years is truly outstanding and makes it a showcase for private initiative in higher education in India. The opportunities in global academic collaborations are truly mind boggling. With so much room for innovation, they will further evolve in the coming years, making all of us interested in it and excited. If I can contribute to ITMU's effort towards this, I offer my assistance.

I must also compliment you and your faculty about your students. The interaction with students was invigorating for both sides. Your students were forthcoming and energetic with many thought-provoking questions.

Vijaya Khandavilli
United States-India Educational Foundation (USIEF)
4 November 2012

Recognitions

ITMU is recognized by various government and regulatory bodies for teaching and award of degrees. The university has been established through an Act of the Haryana Legislature, and approved by the University Grants Commission (UGC). It is also recognized by the Bar Council of India (BCI).

The Association of Commonwealth Universities

ज्ञान-विज्ञान विमुक्तये

ISO 9001:2008 REGISTERED

Bar Council of India

ASIC ACCREDITED 2012 - 2016

International Linkages and Partnerships

To give our students and faculty global exposure to knowledge and research, ITM University has entered into academic alliances with several well-established international universities and establishments.

The University of Warwick

ASQ American Society for Quality

Hogeschool van Amsterdam University of Applied Sciences

itb Institute of Technology Zürcherstrasse

Pukyong National University

Chartered Institute of Arbitrators CIArb

University of Chester

University of Leeds

isep

Outlook MDRA survey 2012

In recognition of its excellent track record, ITMU has been consistently ranked amongst the top engineering colleges and universities of the country year after year by independent national surveying agencies :

- Outlook MDRA Survey 2012
- CSR - GHRDC Survey 2012
- Outlook MDRA Survey 2011
- GFK Mode Study 2010
- Mint Survey 2009
- EFY Survey 2009

12th Convocation Ceremony at ITM University

In an atmosphere of solemnity and grandeur, the 12th degree distribution ceremony of ITMU was held on 31 March 2012. Mr Vikram Singh Mehta, one of the leading corporate executives of India, Chairman, Shell group of industries in India, presided over the convocation. His presence was a source of inspiration to the students.

(L to R) Mr Vikram Singh Mehta (Chief Guest), Mr N.K Dewan, the Chancellor and Prof Prem Vrat, the Vice Chancellor

In all, degrees were conferred on 496 BTech, 46 MTech and 52 MBA students

Celebrations after the Degree Distribution

Degrees were conferred on 594 students of the 2011 batch in their respective disciplines of engineering and management.

The ceremony began with the academic procession to the chanting of Vedic hymns. The lighting of the *ratan deep* marked the auspicious commencement of the ceremony, followed by the melodious invocation of *Saraswati Vandana,* and a rendition of *Vande Maatram* that created an aura befitting the occasion. Sh. N.K. Dewan, Chancellor, formally declared the Degree Distribution Ceremony open.

This was followed by the conferring of the degrees on the graduates and postgraduates of all the branches in engineering and management. In all, degrees were conferred on 496 BTech, 46 MTech and 52 MBA students. In BTech, 151 students passed with honours, and 304 students secured a first class. In MTech, out of 46 students, 23 passed with distinction, and 22 students secured a first class. Twenty-one MBA students of this batch secured first class. Three students of BTech received gold medals having topped 66 institutions under the MD University.

Strengthening Ties with the University of Chester, UK

First Row (L to R) : *Stephen Whewell, Shiv Saran Mehra, Professor T. J Wheeler (Vice Chancellor, University of Chester) & Mr Gautam Rajkhowa*
Second Row(L to R) : *V. Daulet Singh, Avdhesh Mishra, Caroline Rowland, Ela Siddiqui*

> *The two institutions further worked out areas of mutual co-operation relating to students and faculty exchange programmes and research plans.*

The collaboration of ITMU with the University of Chester, UK, received a major impetus with the visit of the members of our Governing Body to the University of Chester on 23 April 2012. The two institutions further worked out areas of mutual co-operation relating to students and faculty exchange programmes and research plans. The University of Chester expressed a desire for a long- sustaining partnership and this was reciprocated by ITMU.

With its expertise in teacher training, the University of Chester would also be considering Faculty Development Programmes for ITM University faculty, the underlying objective being to improve teaching effectiveness through international exposure.

The University of Chester is a public research university with three campuses in Chester and one in Warrington, offering a range of undergraduate and postgraduate programmes in management, computer science and information systems and law, besides many other programmes in the field of applied and social sciences, among others. The University was founded as a college in 1839, and is one of the longest established higher education institutions in the UK, with a strength of over 15,000 students. It received the full university status in the year 2005.

To begin with, our BBA and MBA students could benefit from this cooperation by a one-semester (or one-year) study at the University of Chester. This possibility will be explored by ITMU and Chester University in our forthcoming interaction, which is scheduled to be held shortly at ITMU.

Professor S Shanthakumar
Director
School of Law

Professor S Shanthakumar is currently the Director of ITM Law School, ITM University, Gurgaon. Prior to this assignment, he was Director of MATS Law School, MATS University, Raipur; Associate Professor of Law at Hidayatullah National Law University, Raipur; Controller of Examinations of Hidayatullah National Law University, Raipur; Senior Lecturer at Government Law College, Madurai; and Senior Lecturer at Government Law College, Chennai. His areas of specialization are International Law, Constitutional Law, Human Rights Law, Environmental Law, International Trade Law and Sciences, and Technology Law. He has authored books on Environmental Law and Human Rights Law. He has published a number of research articles on various contemporary legal issues in reputed national and international journals, and edited books. He has presented numerous papers in seminars and conferences both in India and in various other countries, including the US, UK, Italy and Argentina. He has been a very active member of the International Association of Law Schools, USA. He is an alumnus of Madras University. He had his training on teaching law at the National Law School of India University, Bangalore, under a World Bank-funded project, and at the Cardiff Law School, Cardiff, Wales, UK, under a British Council-funded project. He has been involved in training law Teachers on teaching law and legal research at various universities in India as part of the British Council-funded project.

Q. What are the emerging prospects in law education?

Ans. Law impacts our lives in numerous ways. Hence, it is but natural that the legal profession has a duty towards its people. Lawyers play a very important role in society. The skills they acquire in a law school can be successfully employed in numerous ways. Law school education is very versatile, so students get prepared to pursue various career options upon graduation.

Predominantly, on graduation, law students take up law practice before the courts of law, where they represent their clients and seek justice. A vast majority of them prefer a private practice, where they work alone or with partners in a firm to provide legal services to individual clients and corporate clients. While most of these lawyers practice in all areas of law, a few of them choose particular areas of specialization like Criminal Law, Constitutional Law, Corporate Law, Labour Law, Intellectual Property Law, Real Estate Law, Tax Law, etc.

A few lawyers get hired by the government and its departments for legal advice and representation. These lawyers are directly employed by the government for being in-house counsels, or representing it in all litigations before various courts in India.

Apart from these, there are a large numbers of corporate counsels, who are employed by corporate houses as in-house counsels, and who work exclusively for them to advise on legal matters related to business activities.

Some law students aspire to grace the judiciary as judges. They prepare intensively for the Judicial Service competitive examinations, get selected and then appointed as judges. Once appointed to the subordinate judiciary, they move upwards in their career ladder over a period of time.

The most recent trend in the legal profession is the emergence of a number of corporate law firms and LPOs (Legal Profession Outsourcing Companies). These law firms and LPOs visit the campus of various law schools to recruit the brightest students, whom they train and employ in their law firms or LPOs. Due to the attractive compensation packages, the extraordinary work experience, and the working culture/environment these law firms offer, the best law students desire and prefer to join these law firms.

The current trend in legal careers is the hiring of Indian law students by foreign law firms. The cream of the students from top-tier law schools are hired directly by these firms. This trend holds great promise, as foreign law firms prefer Indian law school graduates because of the common law system prevailing in our country, coupled with the fact that Indian law students are proficient in English and their legal skills are on par with their counterparts anywhere in the world.

Legal outsourcing, both onshore and offshore, is transforming law practice, as law firms and corporate legal departments seek to minimize costs, increase flexibility and expand their in-house capabilities.

Even Indian law firms are doing their level best to expand across national boundaries by collaborating with foreign law firms and lawyers, and by forming intercontinental mergers. Though globalization is not new, it is now gaining momentum due to the developments in technology, automating of legal processes, developments in data security, online databases, and emerging technology tools. Powerful mobile devices, software as a service, and secure web-based technology allow legal professionals to work from virtually anywhere. As law firms continue to expand their footprints worldwide, globalization will continue to reshape the landscape of the legal profession in a great way in the coming years.

In recent years, the legal industry has experienced a global paradigm shift in the delivery model for legal services. This new model, known as Legal Process Outsourcing (LPO), transfers the work of attorneys, paralegals, and other legal professionals to legal and paralegal professionals located domestically and overseas. Legal outsourcing, both onshore and offshore, is transforming law practice, as law firms and corporate legal departments seek to minimize costs, increase flexibility and expand their in-house capabilities.

Last but not least, very few law students aspire to join legal academia to become law teachers or professors.

A strong education in law school also equips students with the ability to pursue employment opportunities even outside the legal profession, in areas such as politics, business, and bureaucracy. Law students have opportunities in other sectors like banking, broadcasting, business, civil service, education, finance, insurance, journalism, policy analysis, publishing, and social work.

It is interesting to note that only a law graduate can hold office in all the three

organs of the government, namely, the legislature, the executive and the judiciary. Other graduates may occupy high offices in the legislature and the executive, but not in the judiciary. This is precisely the reason why it is often said that a law degree can open the door to a wide variety of careers which other degrees might not.

Q. What are your views on education beyond the classroom?

Ans. Knowing well that today, legal education has to meet not only the requirements of the Bar, and the new needs of trade, commerce and industry, but also the requirements of globalization, ITMU Law School will ensure academic excellence, and prepare legal professionals equipped to meet the new challenges and dimensions of internationalization, where the nature and organization of law and legal practice are undergoing a paradigm shift.

Using a wide range of methodologies and bringing to bear insights from numerous other academic disciplines, the faculty of ITMU Law School will go to great lengths to impart legal knowledge.

ITMU Law School's commitment to rigorous and exciting legal training is intimately connected to the University's commitment to path-breaking scholarship. Using a wide range of methodologies, and bringing to bear insights from numerous other academic disciplines, the faculty of ITMU Law School will go to great lengths to impart legal knowledge.

ITMU Law School will be a place of continual activity and unrelenting vitality. The array of experiences and opportunities the Law School offers will make each day a potential adventure for every student at the School.

ITMU Law School will be transformed into a unique 'Knowledge Centre', where students will be empowered with the knowledge, passion and drive to excel as leaders in the legal profession, judiciary, public service, non-profit and non-governmental organizations, entrepreneurships, and corporate entities.

Learning at ITMU Law School will stretch beyond the boundaries of the prescribed syllabus. A team of distinguished judges, legal practitioners and consultants, social activists, corporate counsels, and faculty members of law schools across the country will intimately nurture the talent of the students. Already, within a short span of time, ITMU Law School students had the unique opportunity of closely interacting with former chief justices of India, a former chief justice of a high court, arbitrators of international repute, prosecutors of sensational cases, associates of top ranking law firms like Amarchand Mangaldas, AZB Partners, Trilegal, Luthra & Luthra, etc. Stretching legal education beyond the classrooms, law school students had the opportunity of visiting the Parliament of India, visiting the Central Jail at Bhondsi, visiting and participating in the Lok Adalats, interning at various organizations like the Office of the Public Prosecutor, civil society organizations and at various courts in India.

Stretching legal education beyond the classrooms, law school students had the opportunity of visiting the Parliament of India, visiting the Central Jail at Bhondsi, visiting and participating in the Lok Adalats, interning at various organizations like the Office of the Public Prosecutor, civil society organizations, and at various courts in India.

Q. What are the promises of ITMU for law students?

Ans. 1. Law teaching at ITMU Law School is interwoven with related contemporary issues, including international and comparative law perspectives. The curricula and syllabi are based in a multidisciplinary body of social science and scientific knowledge. Curriculum development includes:

a. expanding the domain of optional courses;

b. providing deeper understanding of professional ethics;

c. modernizing clinical courses;

d. mainstreaming legal aid programmes; and

e. developing innovative pedagogic methods.

All the above are coupled with competent, dedicated and devoted faculty members with ample teaching experience in various national law schools and universities.

2. At ITMU Law School, evaluation

methods test critical reasoning by encouraging essential analytical, writing and communication skills. The end-semester examination will be problem-oriented, combining theoretical and problem-oriented approaches, rather than merely testing the memory. Moot court exercises, project papers, snap tests, mid-term examinations, project and subject viva, along with an end-semester examination, will be the pedagogic methods followed for improving quality.

3. At ITMU Law School, steps are taken to develop a serious culture of research like:

   a. Emphasizing analytical writing skills and research methodology as integral aspects of the LLB programme;

   b. Creating excellent infrastructure (including research friendly library facilities, availability of computers and internet; digitization of case law);

   c. Providing access to the latest journals and legal databases available worldwide;

   d. Rationalizing the teaching load to leave faculty members sufficient time for research;

   e. Institutionalizing periodic faculty seminars; and

   f. Publishing quality peer-reviewed journals;

4. At ITMU Law School, we have realized that building world-class law schools today will require a positive response to the growing international dimensions of legal education and of the legal profession, where it is becoming increasingly necessary to incorporate international and comparative perspectives, along with necessary understanding of domestic law. Hence, the initiatives taken to promote such international perspectives include:

   a. Building collaborations and partnerships with noted foreign universities;

   b. Finding ways of evolving transnational curricula to be taught jointly by a global faculty through video conferencing and internet modes;

   c. Creating international faculty, international courses and international exchange opportunities among students.

The aim of our 5-year BBA–LLB (Honours) Degree Programme is to create lawyers who are comfortable and skilled in 'dealing' with the differing legal systems and cultures that make up our global community, while remaining strong in their own national legal system.

5. At ITMU Law School, the aim of our 5-year BBA–LLB (Honours) Degree Programme is to create lawyers who are comfortable and skilled in 'dealing' with the differing legal systems and cultures that make up our global community, while remaining strong in their own national legal system. The ITMU Law School students will be trained to specialize in international trade practices, comparative law, conflict of laws, international human rights law, environmental law, gender justice, space law, biomedical law, bio-ethics, international advocacy, etc. They will also acquire a general knowledge of the American, English, and European Union legal systems, apart from working knowledge of a few foreign languages, like French, German, etc.

Q. Do you believe in the statement: Don't raise your voice, instead, improve your argument?

Ans. I am in total agreement with what Dr Desmond Tutu once said, 'Don't raise your voice - improve your argument.' Good sense does not always lie with the loudest shouters, nor can we say that a large, unruly crowd is always the best arbiter of what is right. It simply means that we need to speak intelligently, not loudly, in order to change this world for the better, and fight for justice and human rights everywhere in the world.

Recently chaired a session on Judicial Activisium vis-a-vis Judicaial Self-Restraint in Judicial Process at a national seminar, at Chennai

Placements

Students after their placement with DELL

> *Departments lead placements proactively and in close coordination with the Training and Placement officer.*

A robust growth curve in campus placements at ITMU has consistently moved in unison with the growth of the University. To provide further impetus to career planning, the Placement Cell has been reorganized to include departments and students. Departments lead placements proactively and in close coordination with the Training and Placement Officer (TPO). The student representatives selected by the departments work in close co-operation with the placement in-charge faculty of their respective departments, interact with alumni and companies, and assist peers in preparing and presenting their CVs.

In the ongoing placements of the 2008-12 batch, the University has achieved 84% placements of eligible students, with 99% offers till date. The process is still on.

Maruti Suzuki and Nagarro Software visited us for the first time. Delloite is yet another high profile company which visited us on 30th August, 2012. It offered a package of over ₹4.6 lakhs for our students. The students are upbeat at the news of ever-improving packages offered by the companies.

Sixteen new companies have been added this year to the existing list of 35, including Maruti Suzuki India Limited, iGate Patni, Samsung Heavy Industries India Pvt. Ltd, Blue Star Limited, Vihaan Networks Ltd, Orange Business Services, Unitech Machines Limited, Apollo Tyres Ltd, to name a few.

ASIC Accreditation - ITMU Wins 'Premier' category

Accreditation Services for International Colleges (ASIC) of UK, a respected international accreditation body for academic institutions worldwide, has recently accredited ITM University and conferred on it a status of 'Premier University.' The university was awarded 'Commendable' grade in as many as seven out of eight measurable areas of a university's operations. The international accreditation is in recognition of ITM University's best academic practices and quality benchmarks. It would enable ITMU students to study across the globe, armed with international recognition, and at the same time provide valuable information to foreign students to make an informed choice on studying at ITMU.

This accreditation comes on the heels of a number of other international alliances ITMU has forged in the recent past, in its pursuit to give its students and faculty the much-needed international academic exposure. It is now a proud member of the Association of Commonwealth Universities (ACU), UK, and has effective students and faculty collaborations with leading international universities and institutions such as the University of Warwick (UK), Institute of Technology Blanchardstown (Ireland), Michigan Technological University (USA), and the American Society for Quality, with a students' chapter at ITMU. The University has other collaborations with the University of Chester (UK), Nanyang Technological University (Singapore), Pukyong National University (Republic of Korea), and Hogeschool van Amsterdam (The Netherlands).

The University, whose philosophy is summed up in the three words in its logo – **Independent, Innovative, and Inspiring** – is well on track to becoming the most sought-after destination for higher education in North India.

It would enable ITMU students to study across the globe, armed with international recognition, and at the same time provide valuable information required to foreign students to make an informed choice on studying at ITMU.

Study-Abroad Programme : ISEP Grants Direct Member Status to ITMU

The International Student Exchange Programme (ISEP), a leading global network in study-abroad programmes, granted 'Direct Membership' to ITMU on 30 August 2012. This will enable students of ITMU to pursue a semester/year in some of the well-known universities across the globe, and get study-abroad credits transferred to ITMU credits on successful completion of their term. The list of universities where our students can pursue their semester/year abroad are as under:

Australia - RMIT University, University of Canberra, University of Western Sydney, University of Southern Queensland

Canada - Brock University, Laurentian University, Thompson Rivers University.

Germany - Philipps-Universität Marburg.

New Zealand- Massey University
Spain- Universidad de Murcia, Universidad Publica de Navarra.

Thailand - Thammasat University.

UAE - American University of Sharjah

UK - Edinburgh Napier University, University of Central Lancashire, University of Chester, University of Plymouth, University Plymouth, University of Sunderland, University of Ulster.

Formation of Nodal Centre for Research at ITMU

A proposal for the establishment of an Indo-US Knowledge Networked Centre, for research studies on climate change and urban water systems involving ITM University (Indian Nodal Centre), DTU (Indian Partner), Michigan Technological University (US Nodal Centre) and University of Massachusetts (US Partner) was submitted on August 14, 2012 by the Department of Civil Engineering ITMU, to the Indo-US Science and Technology Forum, coordinated by Professor Ram Karan Singh and Professor S Krishnamoorthi. The proposal, when formally approved, would be a major impetus in boosting the research efforts in the most critical and challenging areas of water and climate change.

ITM University bags second prize in SUPRA SAEINDIA

The team 'Acceleros' with their dream vehicle

'THE ACCELEROS' of ITMU secured the second position (Prize ₹ 20,000) in the Marketing presentation award at SUPRA SAEINDIA, a national competition held from 6 to 9 September 2012 at Budha Circuit, and became the first team in North India to race the vehicle on the international track. The SUPRA SAEINDIA is a competition which presents the undergraduate and postgraduate engineering students a challenge in designing, modelling and fabricating a formula-type racing car.

> *ITMU became the first team in North India to race the vehicle on an international track*

This vehicle was designed and fabricated under the guidance of faculty advisors Mr Ashwini Sharma and Mr Vinkel Arora, by a team of 25 students – The 'Acceleros' - Jatin Goel (Captain), Kartik Khurana, Karan Mahajan, Dhruvay Jain, Sanchit Tandon, Gautam Chhabra, Sumit Chopra, Gauravsaini, Ankit Dhiman, Swati Mendiratta, Kanchan Vashisth, Himanshu Gugnani, Ishu Jain, Yuganshu Kakkar, Vikas Sharma, Lokesh Mittal, Prabhat Tiwari, Akshay Vashisth, Lakshay Gandhi, Abhiyank Govil, Nitin Rana, Karan Bharwaj, Prateek Dalal, Mohit Grewal and Siddhartha Jaitly – from the departments of Mechanical, Automobile and Electronics Engineering.

ITMU won the first prize for its beautiful garden in the Flower Festival organized by HUDA

The Vice-Chancellor, members of the Governing Body and Registrar with the personnel who helped win 11 trophies

In the recent times, the role of greenery in saving our planet has been universally recognized. ITM University in its own small way contributes in good measure. The University won the first prize in the two-day flower show hosted by the district administration and horticulture department and organized by the HUDA. ITM University has won the first prize for the eleventh successive year for its scenic gardens.

MoU between ITM Law School and Chartered Institute of Arbitrators – India (CIArb- India)

ITMU Law School and Chartered Institute of Arbitrators-India (CIArb-India) entered into a Memorandum of Understanding on 10 March 2012 to spread the reach of both organizations so as to be mutually beneficial on a non-exclusive basis. The MoU was signed at Hotel Lalit, New Delhi, by Professor Shanthakumar, Director, ITMU Law School, and Mr Lalit Bhasin, Senior Advocate, Supreme Court of India, Head, CIArb-India, and was witnessed by Mr Sunod M. Jacob, Faculty, ITMU Law School, and Mr Chandrakant Kamdar, Director, CIArb. Pursuant to the MoU, ITMU Law School will help run courses in Gurgaon and elsewhere in India under the auspices of CIArb–India. CIArb-India, in turn, will also maintain on their website, where it may be relevant, that ITMU Law School located in Gurgaon is its knowledge partner.

Mr Lalit Bhasin and Professor Shantakumar exchanging MoU document

ITMU signs MoU with National Institute of Design (NID), Ahmedabad

The National Institute of Design, Ahmedabad, and ITMU signed a MoU which will build relations between the two major organizations for mutual benefit, and shall also contribute to the growth of employable human resources in our country. With the signing of the MoU, the two organizations surge ahead in taking forward the final-year students' projects. This will be innovative, and will give the students a chance to come up with great ideas and products. With this, undergraduate and postgraduate Students of ITMU can apply for funding of their final-year as well as class-work projects. The project grant will be limited to ₹ 1.5 lakhs per selected project by MSME. Through this MoU, various industrial projects are being undertaken which are enlisted in the MSME design clinic scheme, thereby opening the doors to our industry–academia interaction.

Columbia Asia Hospital is now ITMU's Health Partner – Signs MoU

In what could easily be considered one of the most significant steps towards providing welfare to the students and staff of ITMU, Columbia Asia Hospital, Palam Vihar, one of the leading hospital chains in Asia, signed an MoU with ITMU on 20 September 2012, bringing benefits to the members of ITMU. These are:

- 24-hr free ambulance coverage for pickup in emergencies on the campus and ITMU-run and managed hostels.
- 15% discount on OPD services including investigations and procedures.
- 10% discount on room rent, consultant charges IPD and surgeon fee (except TPA cases).
- Cashless hospitalization and preferential accommodation.
- Visit of at least one super specialist doctors, once a month.
- Provision of medical cover, including medical staff and ambulance (to be positioned in advance) on the days of the freshers' party, 'Momentum', students' farewell party, car racing event, etc. (total not to exceed 7 days in a year)
- 2 health camps and one health *mela* in a year, besides free counselling by clinical psychologists and counsellors, as and when required
- Health awareness talks related to physical, mental and emotional issues.

Hospital Helpline - 0124-39898969

Vice Chancellor's Outreach Activities

Contributions towards the Society at large by his active association with National & International Bodies/ Organizations

Professor (Dr) Prem Vrat
FNAE, FNASc, FWAPS, FISTE, FIIE
Vice Chancellor & Professor of Eminence,
ITM University, Gurgaon

Formerly:

- Professor of Eminence, MDI, Gurgaon.
- Founder-Director, IIT Roorkee.
- Vice Chancellor, U.P. Technical University, Lucknow.
- Director-in-charge, IIT Delhi.
- Professor & Division Chairman, Asian Institute of Technology, Bangkok (Thailand).

In addition to his major contributions to academic excellence and the field of research, as also leadership provided to various educational institutes in the country, he has contributed immensely to society at large by his association with a number of government and non-government bodies as listed below:

1. Member of ATF (Adhoc Task Force), Government of India. – to review performance of state & central govt. of India.
2. Chairman, Working Group on HRD in IT, Dept of IT, Govt. of India.
3. Member of JNU court.
4. Advisory Board member of American Society for Quality (ASQ), India.
5. Advisory Board member of UPSC, for Indian Civil Services selection.
6. Member of board of governors of many technical institutions / universities.
7. Member, Academic Committee, MSEd. - Maharaja Surajmal Educational Society.
8. Honorary Visiting Professor, IIT Delhi.
9. Member, India International Centre.
10. Associate Member, India Habitat Centre.
11. Member of editorial boards of many international and national journals :
    - Industrial Engineering Journal.
    - Journal of Advances in Management Research.
    - VISION – The Journal of Business Perspective.
    - Nice Journal of Business.
    - METAMORPHOSIS – a Journal of management research - IIM, Lucknow.
    - RITES Journal. (high level editorial advisory board member).
    - Journal of Business Thought.
    - Management and Change – IILM.
    - Value-Based Management.
12. Member of Senior Citizens' Welfare Association, Vasant Kunj, New Delhi.

The Leading Voice in INAE

The Indian National Academy of Engineering (INAE) has constituted a forum comprising some of the most distinguished and eminent scholars of our country in the field of technology and management. The thought leadership addressed critical issues confronting the nation, and recommended technology, foresight and management techniques to find solutions. The issues which came up for deliberation included food production and utilization, conservation of water, energy generation and its utilization, emerging trends in manufacturing technology, mass transit systems, and building and construction technologies.

Professor Prem Vrat, who is also a Fellow of INAE, was the leading voice of the forum along with Mr V K Aggarwal and Dr Y P Anand, both former chairmen of the Railway Board and ex-officio principal secretaries of the Government of India; Dr C.R Prasad, former CMD, Gail, and currently CMD, Everest Power; and other distinguished leaders and former heads of some of the most renowned organizations of India. Professor Prem Vrat, when asked about the relevance of the forum, stated, 'I commend INAE for this initiative. It provided us a platform to put our minds together to find solutions to current challenges which are innovative, forward-looking, practical, sustaining, cost-effective and easily internalized in a time-bound manner. Of course nobody denies that ultimately it will be the government implementing the plans which matter.'

A Highly Commended Work : VC gets Emerald Literati Network - 2012 Award for Excellence

Vice-Chancellor, Professor Prem Vrat's research paper titled 'Bio-immune systems analogy for effective managerial decision making in conflicting environment,' published in the Journal of Advances in Management Research, Volume: 8 Issue: 2 – 2011, pp.236-245, has been chosen as a Highly Commended Award Winner at the Literati Network Awards for Excellence 2012.

This paper has been chosen as Outstanding Paper from amongst all the research papers published in the last 12 months.

The award-winning papers are chosen following consultation amongst the journal's editorial team, which comprises eminent academicians and managers. The paper was selected as it was one of the most impressive pieces of work the team had seen throughout 2011.

Key Role in a High Powered Forum to Address National Challenges using Technology, Foresight and Management

The Indian National Academy of Engineering (INAE) has constituted a forum comprising of some of the most distinguished and eminent scholars of our country in the field of technology and management. The thought leadership will address critical issues confronting the nation and recommend technology, foresight and management techniques to find solutions. The issues which will come up for deliberation include food production and utilization, conservation of water, energy generation and its utilization, emerging trends in manufacturing technology, mass transit systems, and building and construction technologies.

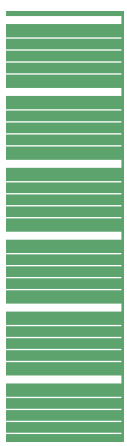
Professor Prem Vrat, Vice-Chancellor and Professor of Eminence at ITM University, Gurgaon, who is also a Fellow of INAE, will be one of the leading members of the forum along with Mr V K Aggarwal and Dr Y P Anand, both former chairmen of the Railway Board and ex-officio principal secretaries of the Government of India, Dr C R Prasad, former CMD, Gail, and currently CMD, Everest Power, and other distinguished leaders and former heads of some of the most renowned organizations of India. Professor Prem Vrat, when asked about the relevance of the forum stated, 'I commend INAE for this initiative. It will provide us a platform to put our minds together and find solutions to current challenges which are innovative, forward-looking, practical, sustaining, cost-effective and easily internalized in a time-bound manner. Of course nobody denies that ultimately it is the will of the government in implementing plans which will matter.'

Research Papers Published and Lectures delivered by the VC:

- 'Role of Technical Universities and Industry in Facilitating Enhancement of Employability: A Road Map' – The Journal of Engineering Education, XIII – Special Issue, Volume: XXV, No.3, January 2012, pp.1-10.
- Published a book review in VISION – The Journal of Business Perspective; MDI, Gurgaon: Volume 16, Number 2, June 2012, on 'Bid Writing for Project Managers', David Cleden: Gower Publishing Limited, UK, 2011.
- 'Impart Quality in Technical Education,' University News, Volume: 50, No.34, August 20-26, 2012, pp.1-5 & 15.
- 'Higher Education in India in the Era of Globalization: Some Reflections,' The Journal of Engineering Education, April & July, 2012, pp.16-27.
- Delivered a special lecture, 'Bio-inspired Engineering & Management Systems,' as a Distinguished Speaker at the Indo-French Symposium, organized by IIT- Delhi on 4 March 2012.
- Delivered an invited lecture, 'Role of Technical Universities and Industry in Facilitating Enhancement of Employability: A Road Map,' at a one-day seminar, 'Technological Universities of India & Higher & Technical Education in Maharashtra,' organized by the Engineering Education Foundation, at Pune on 6 March 2012.
- Participated as an invited guest at the 5th Edition of India's most authoritative conference on Higher Education, 'EDGE 2012,' 12-14 March 2012, at India Habitat Centre, New Delhi.
- Attended a national convention, 'Indian Higher Education – Vision for Quality, Autonomy and Accountability,' as a guest of honour

in the Plenary Session V on the theme, 'Developing an Eco-system for Research,' organized by the Educational Promotion Society for India, 24-25 March 2012, at New Delhi.

- Invited as chief guest to inaugurate a cultural programme organised by the senior citizens' welfare association, Vasant Kunj, New Delhi, to celebrate Holi, on 25 March 2012. The function was well attended, with more than 200 members present at the programmes. Folk songs, dances and drama events were presented by the association.
- Interviewed by ENN on Virtual Lab.
- Interviewed by MBAUniverse.com, where he shared his thoughts on management education in India and the vision for ITM University.
- Attended the MindMine Summit – 2012 as an invited guest on 5 April 2012, at Taj Palace, New Delhi, organized by Hero MotoCorp Limited on the theme, 'India in Transition: For Better or For Worse?,' inaugurated by Mr Anand Sharma, Minister for Commerce, Industry & Textiles, Govt. of India, which was well attended by a number of policy makers, think tanks, authors, journalists, economists and corporate leaders.
- Attended the Leadership Conclave 2012–Vision IIT 2020, organized by the IIT Delhi Alumni Association, on 15 April 2012 at New Delhi, and delivered a special session on autonomy of IITs.
- Delivered an invited speech at a three-day workshop, 'Universal Human Values and Professional Ethics,' on 8 April 2012, at MTU, Noida.
- Attended the Membership Scrutiny Committee Meeting of the National Academy of Sciences, India, on 21 April 2012, at National Institute for Plant Genome Research (NIPGR), New Delhi.
- Advised UPSC, New Delhi, in its Personality Test Board.
- Delivered the keynote address at a seminar conducted by Knowledge Resource Development & Welfare Group (KRDWG), on the theme: 'Existing Framework of Technical & Professional Education from the Perspective of Industry: Expectations and Challenges,' on 24 May 2012, at IIT Delhi. He was also honoured with the Education Leadership Award 2012.
- Delivered a keynote address in the Symposium, 'Corporate Social Responsibility and Sustainable Development in Hydro Sector,' on 16 June 2012, at Shimla, during the Silver Jubilee celebrations of SJVN Ltd., where the Chief Secretary, Government of Himachal Pradesh, was the chief guest.
- Invited by the Indian National Academy of Engineering to be a member of the newly constituted prestigious forum, Technology Foresight and Management for addressing National Challenges. He has accepted an invitation to be a member of the forum being chaired by the former chairman, Railway Board.
- Attended a meeting as a member of the Academic Committee of Surajmal Memorial Education Society on 22 July 2012, at Maharaja Surajmal Institute, New Delhi.
- Attended the 3rd Indian Management Conclave – 2012, as an invited guest, 9 - 10 August 2012, organized by MBA Universe.com at India International Centre, New Delhi.
- As a member of ATF (Ad hoc Task Force) appointed by Cabinet Secretariat, Govt. of India, to assess functioning of central and state government ministries, and attended the 1st meeting of the ATF for the Haryana government on Performance Appraisal, on 5 September 2012, at IIFT, New Delhi.
- As a member of the Ad hoc Task Force, he attended a preliminary ATF meeting to review RFD for the Ministry of Railways for 2012-13, on 11 September 2012, at Performance Management Division (PMD), Cabinet Secretariat, and attended a formal meeting on 17 September 2012, at Cabinet Secretariat, Rashtrapati Bhawan, New Delhi.
- A proposal to publish a book (to be written by Professor Prem Vrat), titled 'Materials Management: An Integrated Systems Approach,' has been accepted for publishing as a part of Springer's (a renowned German publisher) prestigious series, 'Springer Texts in Business and Economics.'



International Conference for the Global Challenges of Climate Change on Water, Environment, and Society

The discussions and paper presentation in progress

Climate change is the greatest environmental challenge facing the world today. Recent events have emphatically demonstrated a growing vulnerability to this phenomenon. The effects of climate change and the response to them, present a major national and global challenge, and the cost of doing nothing about these global challenges could be high, impacting upon our environment, economy and society. Never before has humanity been forced to grapple with such an immense environmental crisis.

Keeping this threat in mind, the Department of Civil Engineering, ITMU, in association with the Department of Civil and Environmental Engineering, Centre for Water and Society, Michigan Technological University, Houghton, USA, organised a two-day Indo-US bilateral workshop on 'Global challenges: Climate change, Water, Environment and Society' sponsored by the Indo-US Science and Technology Forum at ITMU campus, Gurgaon. The objective of this workshop was to exchange information regarding the experiences gained so far in tackling the impacts of climate change in the US and India, and to identify, from these experiences, new areas for collaborative research like integrated hydrological cycle and watershed management, networking of available scientific and socio- economic information on climate change and its impact on water resources, environment and society. The resource speakers included five from USA and fifteen from India, all of whom are engaged in research to tackle the impacts of climate change on water, environment and society. The participants included scholars from government departments, research organizations, academic universities and institutions, and industries from all over India.

The objective of this workshop was to exchange information regarding the experiences gained so far in tackling the impacts of climate change in the US and India and to identify, from these experiences, new areas for collaborative research

The workshop was inaugurated by Dr Nishrita Bopana, Science Officer, Indo-US Science and Technology Forum, New Delhi, on 5 March. Professor Prem Vrat stressed the importance of the world coming together to tackle the impacts of climate change on water, environment and society. Professor Alex Mayer of Michigan Technological University, USA, gave a special address explaining the importance of joint research projects.

The emphasis of the first day of the workshop was to create awareness and to further develop new collaborations in finding solutions to the problems concerning impacts of climate change on water, environment and society. On the second day of the workshop, there were sessions on climate change and its importance on agriculture, transportation, ecosystem and health. The papers presented during the workshop explained the important of climate change on modern agriculture, and adaptation to mitigation strategies, how climate change affects the crop water, and the tools which can be used to reduce gas emissions of highway transportation, to name a few.

'Romance with Engineering', says Professor D.P. Agrawal, Chairman, UPSC, while inaugurating the National Conference on Emerging Trends in Mechanical Engineering at ITM University, Gurgaon, on 1st June 2012

Professor D.P Agrawal delivering the keynote address

On 1 June 2012, ITMU held the National Conference on Emerging Trends in Mechanical Engineering. Professor D P Agrawal, Honourable Chairman of the UPSC (Union Public Service Commission), was the chief guest, and delivered the keynote address at the inaugural function.

Professor Agrawal explained the all-encompassing role of mechanical engineering in the design, planning, manufacturing, installation, operation and maintenance of mechanical systems and equipment used in all aspects of life. He said that it was the most robust branch and mother of all other engineering disciplines. He complimented ITMU for organizing the event, which had received an enormous response. He advised the engineers and researchers present to focus on research leading to product design and manufacture, and employ the done-to-scale that China has done in their manufacturing strategy. Professor D P Agrawal advocated strong linkages of research with industry which must be delivered on a timely basis. He dwelt on emerging trends in nanotechnology, biotechnology and efficient use of materials, and recommended the development of nuclear energy options with due focus on safety. 'For sustainable development, we must focus on reduction of waste of materials and energy to protect the environment, emphasize on ergonomic design and safety in products, and focus on innovation in products and processes,' he said.

Professor D P Agrawal advised students and scholars to develop, nurture and innovate product ideas, and suggested that academic institutions should provide them the backing and facilities to think out of the box in pursuance of their research projects. He also released the conference proceedings, with 72 contributed papers and five invited papers, spanning more than 500 pages. Professor Prem Vrat said, 'It was a privilege for ITM University to have such an eminent person to inaugurate this conference.'

'Shape your Dreams' – A workshop by the E-Cell

The E-Cell of ITMU organized a two-day workshop, 'Shape your Dreams,' from 6 to 7 April 2012, where 37 students from various branches of the ITMU registered themselves. The objective of the workshop was to make them learn the basics of entrepreneurship, and to provide them with a framework for converting their ideas into reality. The workshop covered different aspects of entrepreneurship, like entrepreneurial campus ecosystem, venture lifecycle, idea generation, opportunity evaluation, and exercises on the business model and business plan. The workshop was facilitated by Dr Sheetal Mundra (SOM) and Mr Ashwini Sharma (Mech.). An entrepreneur, Mr Amol Kolatkar, shared real-life experiences with the students and inspired them with his talk.

American Society for Quality (India)-ITM University Conference: A Huge Success!

The global voice on quality with focus on dimensions of leadership made an impact at ITMU, when on 16 March 2012, a joint conference of the American Society for Quality (India) and ITMU, 'Future of Quality in India-Leadership Dimensions,' was organized at the University campus.

The conference sponsored by TATA, the pioneers in quality in India, was attended by over 180 Delhi LMC ASQ members, and faculty and students of ITMU. Some of the most eminent people and experts in their own fields associated with quality, shared their thoughts with the participants and left a lasting imprint in their minds of the need for quality in every aspect of our lives – in our professions, businesses and in community building.

Dr Bharat Wakhlu with Professor Prem Vrat, Mr Kush Verma and others on the dais

Mr Bharat Wakhlu, Board of Directors, ASQ, and Group Resident Director TATA; Professor Prem Vrat, ViceChancellor and Professor of Eminence, ITMU; Mr Kush Verma, Director General, NIAR (National Institute of Administrative Research); Mr Prashant Hoskote, Director,Quality & Performance Excellence, Max India; Dr K Kumar, Director, Maruti, Centre for Excellence; and Mr Arun Kumar (IAS, Retd.) Secy GOI, were amongst some of the most distinguished speakers at the conference. The inauguration of the ASQ(I) Students Chapter at ITMU was the highlight of the event. Amidst huge applause from the participants, the Students Chapter, comprising 55 students of ITMU was inaugurated by the ViceChancellor. 'The future of quality in India lies in young hands,' said Professor Prem Vrat. It was a memorable occasion for the founder members of the Students Chapter.

The conference was very successful in taking the message of quality forward, with a number of initiatives in this regard expected to unfold.

Symposium on International Criminal Law

With the rapid and complex development of a global society, international crime has been in the focus in recent times. International Criminal Law has evolved to combat such serious crimes. ITM University Law School, in collaboration with the International Committee of the Red Cross (ICRC), organized a symposium on International Criminal Law on 20 June 2012 at ITMU. His Excellency, Mr Gudmundur Eiriksson, Ambassador of Iceland to India, a former judge of the UN International Tribunal for the Law of the Sea, Hamburg, Germany, and Mr Manoj Kumar Sachdeva, Trial Lawyer, Prosecution Division, International Criminal Court, were the chief speakers of the day. Addressing the audience, Mr Eiriksson gave a background of International Criminal Law, its scope, and the basis of criminal jurisdiction, with an introduction to the International Criminal Court (ICC). Mr Manoj Sachdeva gave a presentation on the Office of the Prosecutor of the International Criminal Court, highlighting the cases decided by the ICC. Mr Simon Peter Brooks, Deputy Head, ICRC South Asia Regional Delegation, delivered the presidential address, inaugurating the symposium. Dr Sanoj Rajan, responsible for the Academic Programmes, ICRC, South Asia Regional Delegation, Vice Chancellor ITMU, Professor Prem Vrat, Registrar, Brigadier (Retd) S K Sharma, and Director, Law School, ITMU Professor S Shanthakumar, were among the other dignitaries present. Students from various law schools, including the National Law School, Bhopal, NUJS, Kolkata, RGNLU, Patiala, NLU, Orissa, Faculty of Law, Delhi University, Jamia Milia Islamia University, New Delhi, Amity Law School, NOIDA, and the students of ITM University Law School participated in the symposium.

An International Workshop on Strategic Human Resource Management

An International Workshop on Strategic Human Resource Management was organised by School of Management, ITMU from 14 to 19 March 2012, for the students of the Institute of Human Resource Advancement, University of Colombo. The purpose of the workshop was to highlight the HR issues in Indian industry and multinationals in India. The theme of the workshop was 'Strategic Human Resource Management in the Indian context.' The participants were working executives from Sri Lanka and students of IHRA, Colombo. The workshop commenced with the inaugural address by the Vice-Chancellor, and welcome speech by Dr A K Vij. The students of IHRA were addressed by distinguished speakers Dr Seema Sanghi (Ex-Director, FORE School of Management), Dr Kanika Bahl, (Professor, IIT Delhi), Dr Narender Nath Akhori (International Management Institute, Delhi), and Dr A K Vij (HOD, SOM, ITMU). An industrial visit to Parle Industries, Neemrana, was also organized for the participants.

Advanced Ethical Hacking Workshop – XPLOIT

A two day workshop on advanced ethical hacking hosted by the Society of Programming Languages (SPL) was conducted by Kyrion Digital Securities in collaboration with AIESEC-IIT Kharagpur on 24th-25th March 2012.

The event received an overwhelming response from the students of ITM University and the excitement continued through the workshop. Every one present lent a sharp eye and a keen ear to Mr Sulabh Jain (Sr. Research Analyst) and Mr Anuj (Marketing Trainer) who were conducting the workshop. The topics covered included everything from various attacks that belong to a hacker's arsenal to the defenses that would protect a probable victim from those attacks.

The faculty coordinators for the same workshop were Mr Md. Ezaz Ahmed, Mr Gaurav Gupta, Mr Gaurav Aggarwal and Ms Nisha Kharb.

Training Programme in Communication Skills

Ms Sagarika Goswami from the Department of Applied Sciences & Humanities initiated a training programme in Communication Skills for the non-teaching staff of the University. The first session started on 17 March 2012, and was attended by a large number of non-teaching staff.

Workshops by EECE Department

- A five-day workshop, 'Mixed Signal IC Design & ASIC Verification,' was delivered by Mr Vivek Verma and Mr Mandeep Narula (EECE)
- A workshop, 'Wireless and Mobile Communication Simulators (WAMC),' was organized by the EECE Department of ITMU. The simulators covered during the workshop were QualNet and NS-2. Twenty students and two technicians participated in the workshop. The speaker for QualNet was Ms Prabhjot Kaur, and the speaker for NS-2 was Ms Kusum Grewal.
- The Microwave and Millimeter Wave Research (MMWR) Group organized a workshop for MTech students on the topic, 'Antennae in reality – Concepts and Fabrication.' This workshop focused on a briefing on antenna basics, followed by introductory classes to CST Electromagnetics software, designing of a microstrip patch antenna on CST, design layout using ViewMate and Pulsonix software, and finally, hands-on experience with real-time fabrication. Mr Kashish Jhamb and Mr Saurabh Sachdeva (EECE) convened the workshop.

Matlab and Labview Workshop

A workshop on MATLAB and LABVIEW was held from 12 to 14 July 2012 at the University to provide an insight into virtual instruments and technical computing, widely used for industry academics and research. This three-day workshop was organised by the Department of Electrical, Electronics and Communication Engineering (EECE).

The workshop attracted participation from various universities and colleges in the National Capital Region. There were sessions on concepts such as Image Processing Toolbox using MATLAB, Control System and its applications using MATLAB, and LABVIEW for Digital Electronics and Signal Processing.

Faculty participants after successful culmination of the workshop

Lectures and software solutions were given by some of the most eminent professors from IIT Delhi, NSIT, Delhi, and reputed organizations such as Innovative Solutions, National Instruments and Mathsworks.

All faculty members from within and outside the University commended the usefulness of the workshop and requested the management of ITM University to hold more such workshops in future.

National workshop on Scilab

(L to R) Dr Phool Singh, Dr OSKS Shastri, the Chief Guest, Professor Prem Vrat (VC), Dr Kalika Srivastava

The national workshop on Scilab at ITMU was a significant initiative towards research and development, as technology is constantly updated, providing the academic world with new innovations. ITMU organized a national workshop on Scilab from 18 to 20 August 2012. Scilab is versatile software for research and development.

With the growing demand for virtual instruments and technical computing in the R&D segment in industry and academics, high-performance software has become a basic requirement. Matlab is an extensively used software for R&D in almost every area of science and technology, but comes at a cost. However, Scilab is free open-source software, and serves as an effective alternative to Matlab.

This three-day workshop was sponsored by the Council of Scientific and Industrial Research (CSIR) at ITMU, an institution consistently engaged in advancing knowledge. The initiative was on the lines of IIT Bombay, which is a pioneer in the use of this software through MHRD projects.

The workshop provided a broad overview of basic concepts, operational algorithms, theories related to Scilab and, most importantly, critical numerical outcomes. The faculties of various colleges and universities across the country who participated in the workshop got acquainted with the Scilab software package with specific applications related to research and teaching.

Workshop on Artificial Cultivation of Biodiesel-containing Algae

Currently, biodiesel is produced from some edible and non-edible oils from higher plants. However, algae technology offers the opportunity to utilize land and water resources that today are unsuited for any other use and will not put additional demand on limited agricultural land. Moreover, potential yield from algae can be of the order of 50-100 times that of biodiesel obtained from land-based crop plants. A workshop on artificial cultivation of biodiesel-containing algae was organized by Dr Rashmi Tyagi for VIth semester Automobile Engineering students from 12 to 25 April 2012 in the Environmental Sciences laboratory. The students learnt the techniques of preparation of the nutrient medium for cultivation of algae, its sterilization in an autoclave, harvesting of algal cells by a centrifuge machine, transfer of algal cells into a sterilized nutrient medium in laminar flow hood, and incubation of algal culture in an incubator. The growth of algae was observed after two weeks.

Workshop on Human Rights

- Ms Koyel Chakraborty, Faculty, Department of Applied Sciences & Humanities, ITMU, organized a workshop on Human Rights and Literature for the Law students on 29 May 2012. She explained the development and the state of affairs of various issues regarding women's rights and dalit rights, through excerpts from numerous writings of different Indian scholars. The students were given certain assignments pertaining to the topic.

Special Training Session on Professional Writing Skills

The pen is mightier than the sword, and it probably befits a lawyer more than any other professional. From essays to briefs, from moot court memorials to legal notices – good and effective writing skills are indispensable for success in the legal profession. In this context, the students of ITM Law School got a rare opportunity to interact with Ms Harpreet Gurpal Kaur, Principal Correspondent, the Times of India, on 18 May 2012, to learn the techniques of effective writing.

With wide experience in the field of journalism, Ms Kaur explained to the students the 5Ws & 1H (what, why, when, where, who and how) as well as the dos and don'ts of professional writing. With media playing a major role in various socio-legal issues, she expressed the hope that the role of legal professionals would become increasingly important in days to come. She encouraged the law students to develop a habit of writing in newspapers on various legal issues. She suggested that some may consider joining various news agencies as legal correspondents as a career option.

A Seminar on Hydraulic Pump

- A seminar was organised for 3rd-year Mechanical Engineering students by faculty advisors Mr Joydeep Chakraborty and Mr S. Zafar of the ISHRAE Student Chapter of the Department of Mechanical Engineering.. The seminar was conducted by Mr P K Chowdhury, Technical Director of Unique Engineers & ex-General Manager of Blue Star Ltd, on the topic, 'Hydraulic pump.'

Training on CAD

- Training on CAD was conducted for technical staff as part of the Staff Development Programme. Mr Lalit Sharma (Technical Staff) delivered the training.

Workshop on Recent Advances in Arbitration Law

ITM Law School had the privilege of hosting a workshop on Arbitration Law on 10 March 2012. The workshop titled, 'Recent Advances in Arbitration Law,' was held to evaluate the changes that arbitration law has undergone, keeping in tune with the varying demands and challenges in the field of dispute resolution. The panel of speakers consisted of senior arbitrators representing the Chartered Institute of Arbitrators (CIArb). The panel comprised of Mr Chandrakant Kamdar, Hon. Secretary, CIArb, and Anti-Money Laundering Expert; Mr Ratan Singh, Director, CIArb and Advocate, Supreme Court of India; Mr Ashok Sharma, Director, CIArb, and General Counsel & Chief General Manager (Law) at MMTC; Mr V Inbavijayan, Director, CIArb, and Advocate, High Court of Madras; and Mr Samir Shah, Director, CIArb, and Advocate, High Court of Gujarat.

The eminent speakers provided an in-depth analysis of the various facets and the fresh of, changes that have occurred in the field of Arbitration Law

The workshop was attended by law faculty members from various Delhi-based law schools, and commenced with a welcome address by Professor Shanthakumar, Director, ITM Law School. The speakers were introduced to the participants, and the tone was set for the subsequent deliberations. The eminent speakers provided an in-depth analysis of the various facets of, and the fresh changes that have occurred in the field of Arbitration Law. Specific provisions of the Arbitration and Conciliation Act and the Civil Procedure Code were thoroughly assessed and analyzed. In the course of the workshop, several advantages of arbitration as an effective tool for dispute settlement were also highlighted. Following the presentations, Mr Chandrakant Kamdar, who moderated the proceedings, opened the discussions, which saw several issues being raised by the participants and addressed by the speakers. We thank the speakers for sparing their time and providing us an enriching experience.

Teaching Law through Active Learning

ITM Law School organized a one-day workshop, 'Teaching Law through Active Learning,' for Law teachers on 13 March 2012 at ITMU as part of its Faculty Development Programme. The workshop was conducted by Professor Sophie M Sparrow, Professor of Law, University of New Hampshire School of Law, USA. Law teachers from various law colleges participated in the workshop, which focused on adopting active learning techniques in classrooms.

Professor Sophie M Sparrow, Professor of Law, University of New Hampshire School of Law, USA. with ITMU Faculty

Workshop on Taxation

A workshop on taxation was conducted by Ms Shashi Gupta (School of Management) for faculty and staff of ITMU, to guide them on calculating the tax on their income.

Faculty Development Programme (FDP) – Training the trainers

A two-day Faculty Development Programme was organized at the University on 18 and 19 July 2012. The programme was attended by all the faculty members of the University. The chief guest, Professor P B Sharma, Vice-Chancellor of Delhi Technological University, a distinguished academician and versatile leader, made an uplifting and inspiring presentation.

Professor Prem Vrat, Professor M S Sodha, Padmashree, former Vice-Chancellor, Barkatulla University, Bhopal; Mr Sanjay Sahay, Principal Consultant of 'Creation of Future' team; Dr Ajoy Ghatak, a former professor of physics at IIT Delhi; Mr Prashant Tripathi, Director, Advait Life-Education Private Limited; Professor B C Nakra, Professor of Eminence and Principal Advisor to the Governing Body; Dr Krishna Kumar, Executive Advisor, Maruti Centre for Excellence; Professor Subir Saha, Professor IIT Delhi; and Professor B K Das, Dean RDIL, were some of the distinguished speakers at the programme.

The speakers kept the faculty captivated with the powerfully delivered, practical and highly faculty-relevant content of their lectures.

There was excellent feedback from the faculty, who in one voice requested such programmes for them be held more frequently.

Everyone present had a word of praise for Professor B C Nakra, and his meticulous organization of the entire event, in his capacity as the chief coordinator of the programme.

Continuous Faculty Development Programme (FDP)

The FDP will be a continuous programme at the University, and shall be held every fortnight on working Saturdays. All the faculty members will participate in this. It will initially begin with trainers from internal resources, and shall subsequently extend to eminent external speakers from academic and industrial fields.

A Continuous FDP was organized at the Seminar Hall on 18 August 2012. Deputy Dean (Academics) Mr Manoj Gopaliya conducted the training session with the faculty members on the evaluation, grading and moderation process. It was a useful interactive training session, wherein the faculty participated freely, clarifying doubts and putting forward their suggestions. The Vice-Chancellor pitched in to provide further clarity on the usage of the moderation process. The coordinator of the event, Col J R Sharma, thanked the VC, Mr Manoj Gopaliya, and the faculty members for an interactive FDP.

- In the on-going series of FDP, Col (Ret'd) Bikram Mohanty, Controller of Examinations on 1st September 2012 delivered a training session on 'Examination duties, invigilation and reporting of unfair means.' A profoundly educative and interactive session helped faculty understand the system of examinations, a great deal.
- In yet another FDP on 'Mentoring of students' conducted by Ms Jaya Ahuja, Assistant Professor School of Management on 29th September 2012, the faculty staff was apprised of some of the best practices on 'student mentoring.'

Technical Staff Development Program

- The Department of Applied Sciences and Humanities organized a workshop under the Technical Staff Development Programme, on 14 May 2012 for the Physics and Chemistry laboratory staff.

  The workshop was inaugurated by Professor Kalika Srivastava, Head AS&H in the Chemistry Laboratory, in the presence of all the faculty members of the department. In her inaugural address, she highlighted the importance of the workshop, which could help to strengthen their basic and fundamental knowledge of the subject, skills and abilities to assist in organizing and conducting practical classes.

- The CSE IT Department organized a one-week programme from 4 to 7 June 2012 for technical staff to brush up their skills in the field of C++ and DBMS.

- The Mechanical Engineering Department conducted a Technical Staff Development Programme from 4 to 11 June 2012, covering a brief overview, benefits and scope of labs, theory of experiments, experimental set-up and descriptions, practical session of experiments, evaluation and tests. This programme was attended by 17 technicians under the supervision of faculty coordinator Professor J K Gera and support system coordinator, Mr Sumit Bhatt.

- A Faculty Development Programme, 'Education: Skills or Self & the true function of a Teacher,' was organized by the Department of Applied Sciences & Humanities on 27 June 2012.

- Technical Staff Development Programmes by the Department of Mechanical Engineering were conducted for laboratory and technical staff, under the supervision of Professor J K Gera and Mr Sumit Bhat, on 'Importance of Metrology,' on 4 August 2012, and 'Machining Processes on Lathe Machines,' on 18 August 2012.

Training Programme on Remote Sensing and GIS Software 'Geomatica'

The primary base for the economic growth of the developed and developing nations lies in their natural resources. Traditionally, natural resource information has been acquired from different sources using conventional methods. But after the evolution of geoinformatic techniques, large-scale qualitative and quantitative resource information gathering has become feasible. Remote sensing techniques have increased the ability to observe the regions of electromagnetic spectrum way beyond the range of human vision and photographic sensitivity. In applications, remote sensing techniques involve the collection of data through the use of a variety of devices (sensors) for obtaining information on a given object or area. This technique makes it possible to collect data in dangerous and inaccessible areas. Remote sensing techniques involve the measurement of electromagnetic radiation (EMR) which can be used to characterize different landscapes or to study their properties. These techniques are extremely useful in collecting, analyzing, monitoring, displaying and updating precise information.

The Department of Civil Engineering organized a 10-day training programme on remote sensing and GIS software from 3 August to 7 September 2012, every Thursday and Friday, with the help of Rolta India Limited. Professionals from Rolta India Limited imparted training on Rolta Geomatica software to faculty members of different departments.

Training for Supra -2012

In an effort made by the Department of Mechanical Engineering, Mr Deepak Sawkar (GM, Design) Maruti Suzuki India Limited, along with 15 delegates from various industries, conducted a technical inspectors' training for SUPRA-2012 on 4 August 2012 at ITMU.

- Ms Supriya Raheja and Ms Suman Bhatia, along with lab assistants, Mr Satish and Mr Sujit Banerjee, have taken an initiative to update the Operating System Lab (Lab 303) to provide an open source environment, deep understanding of open source culture, and various developments in this regard.

- Mr Deepak Sawkar, (GM, Design) Maruti Suzuki India Limited, along with 15 delegates from various industries, conducted a technical inspectors' training for SUPRA-2012 on 4 August 2012 at ITMU.

- Ms Jiveta Chaudhary conducted a one-day training session on MBTI Type Dynamics and Development at Guru Gobind Singh Indraprastha University, Dwarka, for their certificate course in Behavioural Testing and Training on 11 August 2012.

'Cerebration' – the Technical Fest

ITMU organized a two-day Annual Technical Fest – 'CEREBRATION-2012' – on 15 and 16 March 2012. Remarkable and exceptional, the two-day fest comprised forty-eight events full of non-stop fun and thrills. The fest was a wholesome experience for learning, innovation and a perfect blend of technology with entertainment. The series of events ranged from Snakes & Ladders, an Electronics quiz, Turn Coat (speak both for and against the motion), Mad AD (Advertising), LAN Party (LAN-based series of events), Robocalypse (wars between robots), Highway to Hell (race of a bot against obstacles), Design Your Will (design a robot), etc.

The opening ceremony started with the lighting of the lamp and an introductory speech by the Vice Chancellor, followed by an address by the chief guest, Mr R S Kundi, Executive Director, Rico Industries Pvt. Ltd.

The inaugural ceremony consisted of a traditional Odissi dance recital and an animated dance performance as a tribute to the late actor, Shammi Kapoor. The inaugural ceremony was also witnessed by the students' delegation from Sri Lanka that was at the campus to attend the International Workshop on Strategic Human Resource Management organised by the School of Management, ITMU. The first day of Cerebration consisted of a series of successful events and a very large student footfall. Among the events held offstage and in the arena, Robowars triumphed in terms of pulling the crowds. 'Highway to hell,' another arena event, whose coordinators gained kudos for the amazing track system they created. Other events were Robotrypani, Gaming Lounge, Death race, Electric shock, etc. The highlight of the day was the ITMU Tech-Expo, which consisted of two other sub-events - Panoply (exhibition of the projects made by the students) and Techno-Bazaar (marketing of the projects made by others), which turned out to be an excellent affair. The second day of the event was even more interesting. The event started off with offstage events, which included Zero Gravity (programming with the screen turned upside down), Junkyard Wars (creating a robot with junk scrap), Univ-Connect (debate between faculty and students), Techno Exegesis (technical paper presentation), Moot Court, etc. The arena events included Aeromodelling, Motor speedways, Maze Race, Robo-Soccer, and the original Auto-meet. Cerebration -2012 was a big success, and an immense learning experience for both students and faculty.

A participant explaining his machine model to the judges

'Shab-E-Rukhsat'

A farewell ceremony for departing final-year students of engineering and management was organized on 27 April 2012. The event featured musical performances, group dances, title distribution to final-year students, and a few other events.

Professor Prem Vrat opened the ceremony, addressing the students on the occasion which celebrated their academic accomplishments for the duration of their term at ITMU.

Professor Vrat's words filled them with pride for their alma mater.

Zest and Zeal at Freshers' Party

A lively and entertaining cultural extravaganza of dance, fashion shows, melody, skits and energetic choreography marked the freshers' party on 21 September at ITMU. The feeling of freedom and enthusiasm was felt by every fresher. The new batch of students put up an attractive fashion show, in which smartly dressed girls and boys walked the ramp for the coveted tiles of Mr and Miss Fresher. The contest, held in a number of rounds, was keenly contested. The students were judged on different parameters. Ms Tanya Dua (CSE) and Mr Dharmender (Civil) were adjudged Ms Fresher and Mr Fresher 2012, respectively.

Independence Day Celebrations at ITMU

> *He paid rich tributes to the martyrs and freedom fighters and remembered their sacrifices.*

Independence Day was celebrated at ITMU, with the customary zeal and enthusiasm. The campus was spruced up for the occasion with colours and flowers. Members of the staff came with their children, carrying small national flags.

On his arrival, the Vice-Chancellor was greeted warmly, and he unfurled the tricolour. This was followed by the national anthem and a smart march past by the security staff of the University. The Vice-Chancellor took the salute and the audience cheered the impressive march past.

Speaking on the occasion, the Vice-Chancellor congratulated the audience on the 66th Independence Day. He paid rich tributes to the martyrs and freedom fighters and remembered their sacrifices.

Some excerpts from the VC's speech :

'Our leaders and statesmen who got us freedom were people of selfless devotion and high ideals, who never looked for any fame or power, which is why people followed them. In the past 66 years, we have indeed made progress, especially in the field of technology and science, and our GDP has risen considerably. However, the gulf between the rich and the poor has only widened further. Let us introspect, self-realize as to what we are giving our nation and what we are getting from it. We must believe in liberty: liberty of our thoughts and actions, which come with an equal measure of

responsibilities for what we do. We must understand the real essence of our rights and duties, and if we do this sincerely, we shall get answers to our nagging questions of how to free India of corruption and poverty.'

Professor Prem Vrat, in his speech delivered in Hindi, went on to speak on education. He said, 'It has the potential to liberate humans from narrow mindsets of caste, creed and religion, and unshackle humans from divisionary binds. Education can and shall remove poverty and bring wealth, which is essential to our development. It takes us from the darkness to light, makes us humble, inculcates empathy, and shows us the right path. It is at the very centre of building a great society and a great nation.'

Bringing the focus to ITMU, he asked all members to dedicate themselves to the building of high standards in education. He said, 'Higher education has expectations from all of us, and we must meet these expectations by bringing excellence and quality to our education. This endeavour of ours surely and naturally translates into a nation-building effort.'

Teachers' Day

Teachers' Day was celebrated with great enthusiasm at ITMU on 5 September 2012. The function began with the lighting of the lamp, followed by the screening of a documentary on the life of the former president, Sarvapalli Radhakrishnan. This was followed by an entertainment programme by the students and faculty. Speaking at the occasion, the Vice-Chancellor asked the faculty to dedicate themselves to the noble profession of teaching, and impart high quality knowledge to the students, inspiring them to realize their ambitions. Star performers in teaching, research and academic administration were honoured on the occasion.

Best Head of the Department

Professor Swaran Ahuja

Professor Swaran Ahuja was recognized, as an inspirational leader, motivator and innovator. As an HOD, he has employed a wide range of teaching strategies to effectively engage both faculty and staff. His systematic and proactive approach towards academic administration has led to quality learning outcomes.

Best Researcher

Professor Ram Karan Singh

Professor Ram Karan Singh has a natural flair for research and a desire to excel. It is our pride that his body of work has been appreciated both within and outside the University leading to national and international collaboration. He is an example of a true academician with a strong focus on both teaching and the research front.

Best Emerging Researchers

Mr Neeraj Kumar Shukla

Ms Prabhjot Kaur

Mr Neeraj Kumar Shukla and Ms Prabhojot Kaur have shown great potential and research initiatives along with their ongoing PhD work. It is inspiring to see such talent and zeal for research at early stages of their career.

Best Teacher

Ms Sharda Vashisth

Ms Jaya Ahuja

Ms Archana Sarma

Ms Sharda, Ms Jaya and Ms Archana have displayed outstanding performances through inspirational teaching delivery, effective communication, class participation, passion and commitment. They have created a collaborative and comprehensive environment by maintaining a high teaching and learning standard thereby setting an example for others. Their contribution is testified through sustained excellence in student and peer evaluations.

Special Recognition

Professional commitment, involvement and dedication of two of our faculty members, Professor D R Aggarwal and Ms Anjali Garg, was also recognized.

Contributions towards the Society at large by Professor B C Nakra,
Principal Advisor to Governing Body & Professor of Eminence

Professor (Dr) B C Nakra
DIC,FNA, FNAE, FASc, FNASc, FWIF, FIE, FIIPE, FASI
Principal Advisor to Governing Body & Professor of Eminence,
ITM University, Gurgaon

Formerly:

- Director In-Charge, IIT Delhi
- Dy. Director Faculty, Dean Academic UG & Chairs (B.H.E.L. & RRM) - IITD
- HOD – Mechanical Engg. Also Head & Joint Professor with ITMME Centre (R&D Centre) - IITD
- Head IDD Centre - IITD.
- Professor of Eminence, ICE Division, NSIT Delhi
- Visiting Professor: Imperial College, London, UMIST Manchester, SINTEF, Norway, T.I.T. Japan, S.B. University, London

His pioneer contributions to improve the academic life in education institutions, particularly IITs is well known in the academic community circle. In addition, he has substantially contributed to the society at large by his association with government and non government bodies.

Fellow:

- Indian National Science Academy (INSA)
- Indian National Academy of Engineering (INAE)
- Indian Academy of Science (IASc)
- Indian National Academy of Sciences (INASc)
- World Innovation Foundation (WIF)
- Acoustical Society of India (ASI)
- Life Fellow, Institution of Engineers, India (IEI)
- Life fellow, Indian Inst. of Plant Engineering (IIPE)
- Life Fellow, Indian Society of Technical Education (ISTE)
- Member, Tribology Society of India (TSI)

Coordinator, Indian collaborations with:

- Norway (Tribology, Dynamics & Maint.)
- U.K. (Vehicle Dynamics)
- U.S.A. (Vibration & Noise Engg.)
- Japan (Dynamic Design)
- Ireland (Technical Education)

Author

- Text books in Instrumentation, Measurement & Analysis (3 editions) – T.M .H. Publ.
- Theory & applications of Automatic Controls (3rd edition to appear in 2012)
- Vibration Measurement & Analysis – N.P. C. Publ. (for Industry)

Joint research, Dev. & Consultancy

- IIT Delhi (Hony. Visiting Professor & PhD Research)
- N.S.I.T. (PhD & Sponsored Research)
- Industries - Automotive, Power Manufacturing, Steel, Oil & Natural Gas, Railways, Defence sectors.

Miscellaneous

- Member, Governing Body of a number of Institutions & Faculty Selection Committees.
- Member, Editorial Board of Journals.

CSE-IT Department Faculty Ms Usha Batra on Live Telecast on IBN 7

Ms Usha Batra (CSE/IT) was invited as an IT expert for a live talk, 'Emerging Trends in IT,' in a special programme called 'Campus Calling' on IBN 7, on 24 July 2012. She spoke on the future of the IT industry and why students should join IT- related courses.

Dr Ram Karan Singh, HOD, Department of Civil Engineering, Receives Bharat Jyoti Award

On 29 August 2012, at a function organized by the India International Friendship Society, a leading voluntary organization engaged in promoting economic growth and national integration, with the long-term objective of peace, progress and the prosperity of the global community, Dr Ram Karan Singh was honoured with the Bharat Jyoti Award and a Certificate of Excellence. With this award, Dr Ram Karan Singh joins a gallery of eminent earlier awardees, which include Mother Teresa, Dev Anand, Sunil Dutt, Rajesh Khanna, and Drukchen Jigme Pema Wangchen.

We congratulate Dr Singh on this significant achievement.

Award being received by Dr Ram Karan Singh HOD Civil Engineering from former Governor of Tamilnadu and Assam, Dr Bhishma Narain Singh

Dr Sangeet Srivastava presents his book to Vice President of India

Dr Sangeet Srivastava briefed the Hon'ble Vice-President on the relevance of the book, 'Climate Change and Disease Dynamics in India' and the way forward in terms of probable interventions and policies. Dr R Shukla, the Joint Secretary, Climate Change, in the Ministry of Health and Family Welfare (MoH FW) briefly informed the Vice-President that the book had also recently been presented to Dr M Chan, Director General, WHO, in Geneva by the Secretary Climate Change, Shri P K Pradhan. ITM University takes pride in the work of Dr Srivastava, and felicitates him in his endeavours.

(From left to right): Dr N Dogra, Hob'ble Vice President, Dr Hamid Ansari, Dr R Shukla (Secretary, Climate Change, MoHFW), Dr S Srivastava (ITMU), Dr D Patnaik (Director IMD.)

Distinguished Visiting Professor Dr S K Kaushik's Outreach Activities in the Department of Civil Engineering

The Department of Civil Engineering, ITMU, is implementing the scheme of Distinguished Visiting Professor (DVP) initiated by the Indian National Academy of Engineering (INAE), launched jointly with AICTE in 1999. The scheme envisages the promotion of industry–institute interaction by facilitating the dissemination of knowledge through the expertise of experienced and knowledgeable persons from industry integrating their industrial experience with technical education. Dr S K Kaushik - former Professor and head, Civil Engineering Department, IIT Roorkee, and member of AICTE-INAE under the Distinguished Professorship Scheme, has been associated with ITMU from June 2012 for a period of one year. The aim of this association is to promote various academic programmes like organization of intellectual lectures on smart materials, special concretes, and rehabilitation of structures, repairing of damaged structures, industry–institute interaction, among other activities.

Dr S K Kaushik being briefed by Dr V Gayathri

Dr S K Kaushik, during his interaction from 27 to 29 August 2012 with faculty and students of Civil Engineering, shared research experience and mentored research work. He contributed to the effective utilization of various labs, and recommended their upgradation. He also has plans to upgrade the course curricula of the UG and PG programmes.

Mr Paritosh Tyagi's visits under the AICTE-INAE Distinguished Professorship Scheme

As a result of efforts made by the Department of Applied Sciences and Humanities, Mr Paritosh Tyagi (Former Chairman, Central Pollution Control Board) will be associated with ITMU under the AICTE-INAE Distinguished Professorship Scheme for a period of one year from 1 June 2012, to promote technical education, research, industry–institute interaction, enrichment of curriculum content, and other activities.

In this connection, the Department of Applied Sciences organized his first visit on 13 August 2012 to ITMU, where he addressed PhD, MTech and BTech students and faculty members on environmental concerns for engineers.

He emphasised the key role of engineers in developmental activities, right from the planning to the operational phase. He elaborated on this by giving an example of a common activity like earthwork, which did not merely transfer soil from one place to another, but also meant generation of dust and noise, traffic congestion, disturbance and erosion of top soil, alteration of drainage pattern, creation of pools that serve as breeding places for mosquitoes and consequent spread of diseases. Similarly, various impacts and consequences follow the activities related to generation of power, manufacture of goods and handling and disposal of waste. It is generally seen that a primary activity has impacts and induces secondary activities, which have their own impact, and so on.

Engineers must understand and own their responsibility in environmental matters, which they will be able to do better if they also learn about the principles of environmental sciences and have at least the basic knowledge of the principles of ecology and sociology.

Faculty Updates

- Professor Kehar Singh, Honorary Distinguished Research Professor, ITMU, was the Chief Guest at the National Science Day Function organized by the National Physical Laboratory, New Delhi. He also delivered the keynote lecture on the topic of 'Security Holograms.'
- Professor S Shanthakumar was invited by Dr Ambedkar Law College, Pondicherry, to deliver the 16th Silver Jubilee Endowment Lecture on Environmental Law .
- Professor S Shanthakumar was invited to attend the 2012 Asia-Pacific Law Deans' Forum at Faculty of Law, Chulalongkom University, Bangkok, Thailand, organized by the International Association of Law Schools, to discuss the challenges posed by the internationalization of the legal profession, and to develop strategies for the law schools to face the challenges.

- Mr Sunod M Jacob was invited to judge the quarter-final rounds of the 11th Amity National Moot Court Competition, at Amity Law School, Delhi, organized between 2 and 4 March 2012.
- Dr Sangeet Srivastava (AS&H) delivered a talk titled, 'Downstream flow in the Ganges and Brahmaputra river basins in the projected climate change scenarios,' at the Indo-US Bilateral Workshop on Global Challenges: Climate Change, Water, Environment and Society, organized jointly by the Department of Civil Engineering, ITMU, and the Department of Civil & Environmental Engineering, Centre for Water & Society, Michigan Technological University, Houghton, USA, from 5 to 6 March 2012 at ITMU.
- Ms Deeksha Thakur Madan (AS & H) delivered a talk on Time Management at BCIPS, Dwarka.
- Dr Sangeet Srivastava (AS&H) delivered a talk on Climate Change and Disease Dynamics in India at TERI, IHC, Delhi.
- Mr Ashwini Sharma and Mr Vinkel Arora (Mechanical Engineering) were invited as Chief Guest and Guest of Honour for a certificate distribution ceremony at CIPET, Gurgaon. Mr Anil (Manager - CIPET) and Mr Subhash Walia (Vice-President, -KAEFER Punj LLOYD) also visited ITMU for industry–institute interaction.
- The PhD research topic, 'Investigation of various surface treatments on gear failures' by Mr Pawan Taneja (Mechanical Engineering), was finalised by DRC (Mechanical Engineering), YMCA University of Science and Technology, Faridabad, under the guidance of Professor M.L. Aggarwal.
- Mr Ajay Verma (Mechanical Engineering) presented his PhD comprehensive report under the guidance of Dr P K Saini, and his PhD research topic, 'Analysis of Lubricant Film Formation in Inlet Zone of Cold Rolling Process with Oil-In-Water Emulsion,' was finalised by DRC (Mechanical Engg.), NIT Kurukshetra.
- Professor S Shanthakumar was invited by Jindal Global University to be the chief guest and chair the Second Jindal Global Law School Student Research Colloquium on 25 April 2012.
- Mr Prahlad Singh, Mr Ashwini Sharma, Mr Vinkel Arora, Mr Amit Dahmija and Mr Lalit Sharma (ME) attended a training programme on Surfacing and mould design in solid works, from 16 to 20 April 2012.
- Ms Amanpreet Kaur (EECE) attended a Faculty Development Programme on TCP/IP Based Computer Networks from 16 to 20 April 2012, at NITTTR, Chandigarh.
- Professor A K Yadav (AS&H) has undergone the assessment for accreditation by QCI-NABET as functional area expert in Air Quality Modelling and Prediction. This exercise was conducted by the assessors from QCI-NABET at Bangalore from 20 to 21 April 2012, for empanelment with Environmental Health and Safety Consultants Pvt. Ltd., Bangalore.
- Ms Sunaina Sangwan and Ms Jiveta Chaudhary (SOM) have been awarded the MBTI®Certification from Anahat Organisation Development Consultancy Private Limited. This means that they are certified as practitioners to use the Myers-Briggs Type Indicator for the development of self and others. The MBTI tool is the most widely used personality instrument in the world, with over two million using it annually.
- Mr Vinkel Arora presented his comprehensive PhD report successfully, under the guidance of Dr Gian Bhushan and Dr M L Aggarwal, and his PhD research topic, 'Design and Analysis of leaf Springs in Automotive Vehicle using CAE tools,' was finalized by DRC (Mechanical Engg.), NIT Kurukshetra.
- Dr Sheetal Mundra and Ms Shashi Gupta (School of Management)

attended a Faculty Development Programme on Designing Research Instruments and Survey Scales, at Apeejay School of Management on 8 May 2012.

- Ms Sunaina Sangwan and Ms Jiveta Chaudhary (School of Management) attended a Faculty Development Programme on Essential Tools for Quality Research at Delhi Institute of Advanced Studies on 11 and 12 May 2012.
- Mr Gaurav Gupta (AS&H) has been awarded a PhD degree for the thesis entitled, 'Reconstruction of 3D Objects and Curves from two or more perspective images,' by H. N. B. Garhwal University (a central university), Srinagar, Garhwal, (Work place: IIT Roorkee) on 2 May 2012.
- Dr Dinesh Bisht (AS&H) delivered a lecture on Soft Computing: Fuzzy Logi' on 28 April 2012, at SGT Institute of Engineering and Technology, Gurgaon.
- Ms Koyel Chakrabarty (AS&H) was invited to BRCM College of Engineering and Technology for a guest lecture on 12 May 2012. Her topic of discussion was Interview Skills: the key to Success.
- Mr Sunod M Jacob (School of Law) successfully defended his PhD thesis titled, 'A Legal Perspective to India's Energy Security,' at the public viva voce conducted at Department of Legal Studies, University of Madras, on 30 April 2012.
- Professor S Shanthakumar, Director, School of Law, presented a preliminary report on the establishment of the National Law Teachers' Academy to the Chairman and the Members of the Bar Council of India on 5 May 2012.
- Professor S Shanthakumar attended a meeting on Contract Management, along with associates from top tier law firms, at Hotel Le Meridian, New Delhi, organized by Novel Training Academy, New Delhi, on 12 May 2012.
- Mr Subhradipta Sarkar (School of Law) and Mr Deepak Sharma, Assistant Librarian, co-authored a chapter namely, Open Access Revolution in Legal Research: Dire necessities in the book 'Access to Legal Information & Research in the Digital Age' (Ranbir Singh et. al. eds., National Law University Delhi Press, 2012) (ISBN- 978-81-923638-3-7)
- Mr Ashwini Sharma and Mr Vinkel Arora (Mechanical Engineering) attended a seminar on Accelerate innovation through realistic simulation on 18 May 2012.
- Mr Ashwini Sharma visited BTH Company, Jalandhar, on 2 June 2012 for a project on the design of low-cost ICU beds. The project is being sent to the MSME for funding, and will be jointly carried out by Mr Ashwini Sharma, Mr Vinkel Arora and Professor Prahlad Singh.
- Mr Vinkel Arora and Mr Ashwini Sharma conducted a workshop on Basics of Solid works, from 11 to 12 June 2012. The faculty received hands-on training related to software.
- Ms Prachi Sohoni and Ms Vaishali Sahu (Civil Engineering) attended a one-day workshop titled, 'Urban Challenges in the Context of Climate Change,' on 20 April 2012 at IIT Delhi.
- Ms Rita Chhikara (CSE&IT) attended a Faculty Development Programme, 'Essential Tools for Quality Research,' at National Institute of Advanced Studies, Rohini, New Delhi, on 11 and 12 May 2012.
- Ms Niharika Garg's (CSE&IT) DST project under the Women Scientists Scheme, titled Logistics@3600 tracking using RFID and pocketPC wireless scanners, has been approved with a financial outlay of Rs. 19,45,000.
- Mr Subhradipta Sarkar was invited to take part in the National Conference on National Security and People's Right to Information in India organised by the Indian Institute of Public Administration (IIPA) and Commonwealth of Human Rights Initiative (CHRI) on 27 and 28 May 2012 at IIPA Conference Hall, New Delhi. He presented case studies on the orders of the Central Information Commission, regarding the Delhi Police.
- Mr Subhradipta Sarkar was invited to take part in the National Consultation on Human Rights of the Street Vendors of India, organised by the National Association of Street Vendors of India (NASVI) on 7 June 2012 at Constitution Club, New Delhi. He deliberated on the various provisions of the Street Vendors (Protection and Promotion of Livelihood) Bill, 2011.
- Dr Sunil Hans and Dr Vikas Malik attended a short-term course, Introduction to Financial Mathematics, at IIT Delhi from 9 to 13 July 2012.
- Ms Koyel Chakrabarty reviewed three papers for the International Educational Research Journal, Nigeria, and has become an Associate Editor of KAFLA Intercontinental Journal, India.
- Dr Gaurav Gupta delivered a lecture in a QIP course titled, 'Image Processing and Computer Graphics for Scientific Visualization,' organized by the Department of Mathematics, Indian Institute of Technology, Roorkee, from 9 to 13 July 2012.
- Mr Lalit Upadhayay and Mr Pradeep Rohilla (Mechanical Engineering)

Papers Published/Presented

- Ms Payal Khurana and Ms Poornima Gaur (AS&H) presented a paper, 'Western Virus and Cultural Schizophrenia,' at the two-day 'International Conference on Humanism, Democracy and Culture: Postcolonial Discourse and India', organized by the Department of English, RKSD (P.G.) College, Kaithal, Haryana.
- Ms Payal Khurana (AS&H) presented a paper, 'Emotional Intelligence: The Need of the Hour,' at the 'International Conference on Youth & Positivism' at Amity University.
- Ms Divyabha (AS&H) presented a paper titled, 'Subsistence of Undesirable,' at the National Seminar on Abortion, Social Ethics and Exclusion of Female Foetus at Dronacharya College, Gurgaon.
- Ms Shrutimita Mehta (AS&H) presented a paper titled, 'Girl child: A lifetime of Discrimination, Deprivation and Devaluation,' at the National Seminar on Abortion, Social Ethics and Exclusion of Female Foetus at Dronaacharya College, Gurgaon.
- Ms Deeksha Thakur Madan (AS&H) presented a research paper titled, 'HR Ethical Issues in Global Business,' at the International conference on Human Resource Management at HIM, Sonepat.
- Ms Deeksha Thakur Madan (AS&H) presented a research paper entitled, 'Impact of Multinational Organizational Culture and Climate on MNC Employees and the Society', at the National Conference on Enhancing the People Factor-Human Resource Issues and Challenges, at IP University, Dwarka
- Mr M K Srivastava, R K S Maurya, B P Singh, S Tiwari, R K Mall, A K Srivastava, Mr Sangeet Srivastava (AS&H), and U S Dey published a paper, 'Changing Environment and Solar Radiation Response: Regional study over India,' in the Proceedings of the Indo-US Bilateral Workshop on Global Challenges: Climate Change, Water, Environment and Society, pp.1-9, ITMU, Gurgaon.
- Ms Koyel Chakrabarty (AS&H) presented and published a paper entitled, 'Justice for all: Reading Literature as a potent source for reflecting lives that need legal aid in Indian society,' at the International Conference on Legal Aid: Catalyst for Change, organized by the Campus Law Centre, University of Delhi (pp.34-44).
- Ms Koyel Chakrabarty (AS&H) presented and published a paper entitled, 'Connecting Human Rights and Literature: A Comparative Study,' at the International Conference on Role and Responsibilities of Humanities and Social Sciences in Technical Education, organized by SRM University (pp.64-68).
- Ms Koyel Chakrabarty (AS&H) presented a paper entitled,: 'Hospitality Etiquette: A Language to say 'We Care,' at the National Conference on New Paradigms in Tourism Industry, organized by DAV Centenary College, Faridabad.
- Ms Koyel Chakrabarty (AS&H) presented a paper entitled, 'Why is my caste my only identity? Deciphering the Poetics and Politics of Joothan: A Dalit's Life and Karukku as Postcolonial Texts from Human Rights Perspectives,' at an International Conference on Humanism, Democracy and Culture: Postcolonial Discourse and India, organized by RKSD College, Kaithal.
- Mr Subhradipta Sarkar and Ms Archana Sarma (both Faculty of Law) co-authored an article titled Disaster Management: A Black Hole in Indian Judicial System in Legal News and Views, Vol. 26 no. 6, (June 2012) pp. 14 – 20 (ISSN 2277-5323).
- Ms Deepindar Deep (School of Law) presented a paper titled, 'Knowledge Management- Imperative Base to Strengthen Worktable Efficacy,' at the National seminar on 'Knowledge Management and HRM: Issues and Challenges,' organized by the Centre for Management Studies, Jamia Millia Islamia University. The paper was published in the seminar proceedings (ISBN- 978-81-922331-1-6).
- Professor S Shanthakumar (School of Law) presented a paper, 'Mainstreaming Climate Change Mitigation Options: Need and Role of the Civil Society,' at the Indo-US Bilateral Workshop on Global Challenges: Climate Change, Water, Environment and Society, at ITMU Gurgaon.
- Mr Subhradipta Sarkar (School of Law) presented paper titled, 'Judicial Insensitivity towards Disasters,' at the National Seminar on New Dimensions on Judicial Activism, organized by Saveetha School of Law, Saveetha University, Chennai

- Mr Subhradipta Sarkar (School of Law) presented a paper titled, 'Open Access Revolution in Legal Research: Dira necessitas (The Dire Necessity),' at the International Conference on Access to Legal Information & Research in the Digital Age (ICALIRDA) 2012, organized by the National Law University, Delhi. The paper was co-authored with Mr Deepak Sharma, Assistant Librarian, and was published in the conference proceedings (ISBN- 978-81-923638-3-7).
- N Dogra, Mr Sangeet Srivastava (AS& H) published a book entitled, 'Climate Change and Disease Dynamics in India,' TERI Press (2012).
- Dr Sheetal Mundra pubilished her paper, 'Interweaving of Entrepreneurial Skill Development and Management Education,' in the International Journal of Management and Business Studies (IJMBS) VOL.2, Issue.1, Jan-Mar, 2012 (ISSN: 2230-9519 (online), 2231-2463 (Print).
- Mangla, S K & Rajshree, R (2012) 'Mobile Telephony and Economic Growth: An Econometric Study on India,' Conference Proceedings, 3rd International Conference on M4D, jointly organised by Society of Education and Research Development, India, and Human IT Karlstad University, Sweden, Karlstad University Studies 2012:3 (ISSN: 1403-8099 ISBN: 978-91-7063-407-9).
- Ms Jagdeep Kaur (CSE&IT) presented a paper, 'Evaluation of component selection techniques and factors in component based software development,' at 'ICIAICT 2012', organized by Gautam Buddha University, Greater Noida, & Computer Society of India, Noida Chapter.
- A Technical paper titled, 'Comparison between the performance outputs of fuzzy and neuro-fuzzy based controllers used for temperature control in an electric muffle furnace,' was published in Proceedings 2012, IEEE International Conference on Electronics and Computer Technology, Volume I, on 6 April 2012, at Kanyakumari; India, Editorial Production by Yian Li, pp 618-622. The paper was authored by Mr Natraj Mishra, Mr Parameshwar Sathyanarayanand & Professor B C Nakra. Mr Natraj Mishra presented the paper at the above venue.
- Mr Abhishek Pratap Singh's MTech thesis, 'Inverse Kinematics of 6 UPS Parallel Manipulator' was published in the form of a printed book by international publisher LAP LAMBERT Academic Publishing GmbH & Co. KG, Germany (ISBN-978-3-8484-8279-5).
- Ms Shashi Gupta (SOM) and Nishu Goyal (Student of MBA) presented a paper, 'Empirical analysis of CAPM and APT Model on FMCG sector companies listed in BSE Stock Exchange,' at a National Conference organized by the Jaipuria institute of Management, Ghaziabad.
- Mr Sanjay K Mangla, (SOM) and Nayak, T.K's paper entitled, 'Oil Price Hike in India: Shock to the Common Man,' was published in Reader's Forum, Journal of IMS Group, Ghaziabad, July-Dec. 2011, Vol8 No 2, pp.69-70 (ISSN 0973-824X).
- Mr Hukum Singh (AS&H) presented a paper, 'Optical and Thermal Properties of Polymeric Materials: Photoacoustic Spectroscopic Technique,' at the National Conference on Materials Characterization by Ultrasonic (NSMCU-2012) / USI, organized by Amity School of Engineering and Technology, New Delhi.
- Mr Gaurav Aggarwal (CSE&IT) presented a poster, 'Development of different times scales in zebra finch song: new insight from computational analysis,' at the 11th IT&T Conference 2012, held at Cork Institute of Technology, Ireland.
- Ms Deepindar Deep (SOL) presented a paper titled, 'Financial Inclusion in India – Profitability or Responsibility,' at the International Conference on Contemporary Innovative Practices in Management, organized by Pacific University, Udaipur.
- Professor Jagdish Shivhare and Professor S B Jain (EECE) presented a paper, 'Design and Development of Single Fold Hairpin Line Micro strip Band pass Filters for Trans/Receive Systems,' IEEE- Explorer-IEEE@CFP 11598-ISBN-978-1-4-4577-11107.
- Ms Sharda Vashisth and Ms Savita Sondhi (EECE) presented a paper, 'Real time acquisition, processing and analysis of human carotid pulse waveforms using MATLAB,' at an International Conference on Current Trends in Technology at Ahmedabad.
- Ms Anjali Garg (EECE) published a paper, 'Switching control of self-excited induction generator under steady state conditions,' in the International Journal of Computer Applications.
- Professor Jagdish Shivhare and Professor S B Jain (EECE) presented a

paper, 'Design and Development of Low cost and Light Weight Microwave Bandpass Filters for Communication Systems,' in the International Journal of Computer Applications (IJCA-USA-Impact Factor 0.835), Vol 39, No. 03.

- Mr Vinkel Arora presented a paper titled, 'A comparative study of Standard & casted eyes design of Mono leaf springs,' at an International Conference on Recent Advances in Mechanical Engineering, (INCRAME 2012), held at Dr MGR University, Chennai.
- Dr A K Misra (Civil Engineering) published a paper, 'Climate change: impact, mitigation and adaptation strategies for agricultural and water resources in Ganga Plain (India); Mitigation and Adaptation Strategies for Global Change,' at Springer (online published) DOI 10.1007/s11027-012-9381-7.
- Dr Shrutimita Mehta (AS&H) published 'Reflections on Come Up and be Dead by Shashi Deshpande : A Psychosocial Assessment,' in Creative Writing and Criticism, An International Biannual Journal of English Studies, Volume IX, Number 2, pp. no. 79-86, 2012.
- Ms Pranati Purohit, Mr D K Roy and Ms S P Pati (AS&H) published 'Single Electron Tunnelling (SET) Effects and Optical Properties of Quantum Dots,' in the Orissa Journal of Physics, Vol.19, No.1, 2012, pp. 129-138.
- Ms Rita Chhikara (CSE&IT) published a research paper 'Concealing Encrypted Messages using DCT in JPEG Images,' in International Journal of Electronics and Electrical Engineering, Vol. 2 Issue 1 pp 9-12 , ISSN:2277-7040
- Ms Rita Chhikara (CSE&IT) published a research paper, 'Concealing Encrypted Messages using DCT in JPEG Images,' in the International Journal of Electronics and Electrical Engineering, Vol. 2, Issue 1, pp. 9-12, ISSN:2277-7040.
- Dr Ram Karan Singh (Civil Engineering) presented a paper, 'Urbanization and Sustainability of Subsurface Water Hydrology of Gurgaon, NCR, Delhi & Nexus with Delhi,' at the National Workshop on Hydrological Data Management in Gujarat: Present State and Trends, on 21 April 2012, at Pandit Deendayal Upadhay Petroleum University (PDPU), Gandhinagar, Gujarat, India, under a World Bank-funded HP-II project.
- Dr Shrutimita Mehta (AS&H) presented a paper, 'Reflections on Psychosocial Development and Validation of Identity Crisis in 'The Dark Holds no Terrors' by Shashi Deshpande,' at the National Conference on Contemporary Social Realities in Indian English Fiction of Post 1980's', held on 19 May 2012, at MRI University.
- Ms Koyel Chakrabarty (AS&H) presented a paper entitled, 'She: Analysing the Women in Kundalika Kapadia's Seven Steps in the Sky,' at the National Seminar on Contemporary Indian Women Writing: Recreating World through Word', organized by Adarsh Mahila Vidyalaya and Higher Education Commissioner, Bhiwani.
- Ms Poornima Gaur (AS&H) presented a paper, 'Women Empowerment- An Ordeal for the contemporary Indian Society,' at a two-day national seminar at Delhi Technological University, Delhi.

The following research papers were published in Proceedings 2012, National Conference on Emerging Trends in Mechanical Engineering at ITM University, Gurgaon, on June 2012:

- 'Dispersion Characteristics of Pollutants from Vehicular Exhausts in Street Canyons using CFD Techniques,' by Professor K K Chaudhry.
- 'Experimental Performance Analysis of Earth-Air Heat Exchanger for Energy Efficient and Eco-Friendly HVAC Systems,' by Professor O P Chawla, Mr Joydeep Chakraborty, and Mr S Zaphar.
- Assessment of Reliability of a System Using Monte-Carlo Simulation Technique,' by Professor O P Chawla.
- 'Detailed Chemistry Predictions for Inverse and Normal Laminar Ethane Jet Diffusion Flames under Oxygen Enhancement and Gravity-Variation', by Dr Pramod Bhatia.
- 'Implementation of Value Analysis/Value Engineering through Go Fast Approach in an Automobile Company,' by Mr Om Ji Shukla.
- 'Study of Laminar Jet Diffusion Flames under Oxygen Enhancement: Review,' by Ms Swati Bhardwaj and Dr Pramod Bhatia.
- 'Quality management in supply chain – Case study of tractor industry,' by Mr Ashwini Sharma.
- 'Impact of projectile on Al beams of different thickness,' by Mr Rashid Akhtar.
- 'Comparative study of CFD Analysis of Performance Characteristics of S-shaped & Y-shaped Diffusers with combined horizontal & vertical offsets,' by Mr Manoj Gopaliya.

- 'Workspace and singularity analysis of six degrees of freedom parallel manipulator using inverse kinematics on MATLAB, published and presented by Mr Abhishek Pratap Singh.
- 'Speed Control of a D.C. Motor using Conventional and Intelligent Control Techniques,' published and presented by Mr Natraj Mishra and Professor B C Nakra.
- 'Cruise Control Using Fuzzy Logic and PID Controllers,' by Mr Natraj Mishra and Mr Parmeshwar S.
- 'Analysis and metalling of sheet metal component for the wrinkle-free surface of deep drawing die part in fast form,' published and presented by Mr Dinesh Kumar, Mr Surya Praksh, Mr Sunil Pandey, and Mr Pradeep Rohilla.
- 'A Comparative study of Standard Eye and Riveted Eye Design of a Mono Leaf Spring,' technical paper by Mr Vinkel Arora.
- 'Experimental and CFD analysis of solid suspension in a slurry pot tester,' technical paper by Mr Lalit Upadhayay.
- 'Monitoring of rotor system using frequency component (db),' by Mr Sunil Pandey, Mr Surya Praksh and Mr Dinesh Kumar.
- 'Evaluation of Risk Levels in Hazardous Industries,' by Ms Shikha Kashyap and Professor K K Chaudhry.
- 'Simulation of Diffuse Pollution Load from the Surface Runoff,' by Dr Ram Karan Singh.

❑ Mr Rashid Akhtar (ME) presented a technical paper titled, 'Experimental analysis of Al beams impacted by projectiles of different nose shapes,' at the National Conference at Hindustan College of Science and Technology, Farah, Mathura, on 8 June 2012.

❑ A paper titled, 'Quality Management in Supply Chain – a Literature Review,' has been published by Mr Ashwini Sharma (ME) in the International Journal of Quality Research.

❑ Ms Vaishali Sahu and Dr Ram Karan Singh wrote a book titled, 'Quality Assessment & Management for the Delhi Stretch of River Yamuna,' published by LAP LAMBERT Academic Publishing, Germany.

❑ A seminar on 'Career options for Mechanical Engineers' was organized by the Department of Mechanical Engineering on 30 May 2012. The seminar was conducted by Mr Vijender Gupta (VP-TAFE Motors and Tractors Limited, Faridabad).

❑ Mr Manish Parashar (Director–TESCON Energy and Infrastructure Limited) visited ITMU, and was briefed on the need for students training in the power sector.

❑ Sunaina Sangwan and Jiveta Chaudhary (SOM) presented a paper titled, 'Analysis of the Relationship between Psychological Empowerment and Organizational Commitment: an Empirical Study of BPO Employees in Gurgaon India,' at the National Conference on Emerging Challenges for Sustainable Business – 2012, organised by the Department of Management Studies, IIT Roorkee, on 1 and 2 June 2012.

❑ Sunaina Sangwan published her paper, 'Student Satisfaction among Private and Government Universities in Haryana-NCR Region,' in the Global Education Journal (ISSN 2152-3622, OCLC 70555745), June 2012 issue.

❑ Sunaina Sangwan and Jiveta Chaudhary (SOM) published their papers, 'Assessing the impact of Perceived Empowerment of faculty members on their Organizational Commitment in a private university in India,' in the International Journal of Human Resource Management and Research (ISSN-print: 2249-6874; ISSN-online: 2249-7986), in the April-June 2012 issue.

❑ Shashi Gupta (SOM) published her paper, 'Determinants of FDI- a Co-integration Approach,' in the April issue of the International Journal of Art, Science and Commerce.

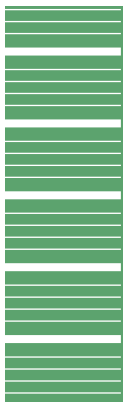
❑ Dr R K Singh (Civil) and Anju Bala published a paper titled, 'Monitoring of Evapotranspiration in Major Districts of Haryana using Penman Monteith Method,' in the International Journal of Engineering Science and Technology (IJEST), Vol. 4, No. 07, July 2012, pp. 3419-3433.

❑ Dr V Gayathri (Civil) along with two other professors, published a paper titled, 'Cement and fiber stabilization of Indian fly ashes,' which was awarded for being the best paper at the international conference, EnCon 2012, 5th Engineering Conference - Engineering Towards Change - Empowering Green Solutions, held from 10 to 12 July 2012, at Pullman Kuching, Sarawak, Malaysia.

❑ Mr Prahlad Singh (ME) presented his paper titled, 'Thermohydrodynamic Analysis of Fully Flooded Inlet Zone in Metallic Strip Cold Rolling Process: Investigations with Smooth vs Rough Surfaces', at the national conference on

Emerging trends in mechanical engineering, held at ITM University, Gurgaon, on 1 June 2012.

- Pallavi Kharbanda, Divya Agarwal (AS&H) and Deepa Sinha published a paper titled, 'Generalized (d-ρ-η- θ)-type I univex functions in Multiobjective Optimization, Advances in Operations Research,' Volume 2012, Article ID 279215, 13 pages, 2012. doi:10.1155/2012/279215
- Dipti Vaya (AS&H) published a paper titled, 'Nanotechnology: Green Chemistry, International Journal of Green and Herbal Chemistry,' 1(2012) 52-54.
- Dr Divyabha (AS&H) presented a paper titled 'Pursuance of Beingness: A Case of Unwanted Girl Child,' at the International Conference on Emerging Issues and Challenges in Education: Global and Indian Perspective, from 9 to 11 June 2012, at NAG College, Amroha.
- Rashmi Tyagi and Rana D presented a paper titled, 'Optimization of growth conditions and tolerance range of temperature and light intensity for an isolated green alga Botryococcus braunii,' at the National Conference on Emerging Trends in Mechanical Engineering, ME Department, ITM University, Gurgaon, Haryana.; pp. 488-493.
- Ms Jaya Ahuja and Mr Sanjay Mangla (SOM) presented a paper titled, 'Carbon Emissions and Development - A Study of BRICS countries,' at IIM Bangalore, in collaboration with Curtin University and SOBED, from 9 to 11 July 2012. The paper is published in the conference proceedings and in a separate book.
- Ms Jaya Ahuja and Dr A K Vij (SOM) published a research paper titled, 'A Path to Academic Excellence through Transformational Leadership - A Case Study of ITM University, Gurgaon,' presented and published in the conference proceedings at the Conference on Excellence in Higher Education, from 28 to 30 June 2012.
- Ms Jaya Ahuja (SOM) published a research paper titled, 'Effectiveness of 'Grievance Redressal Procedure on Job Satisfaction,' in the International Journal of Conflict Resolution, Franklin Publishing House, USA, June 2012.
- Mr Praveen Kumar Chaudhary, Sr. Library Assistant, published a paper titled, 'A Prospect of Chanakya Niti in Modern Management System,' in the Journal of Advances in Computational Sciences and Technology, ISSN 0973-6107, Volume 5, Number 2 (2012), pp. 351-359.
- Ms Niharika Garg (CSE&IT) published a paper titled, 'Improving Business Logistics using Barcode Scanners,' in the International Journal of Computer Applications (IJCA July 2012 Edition), ISBN: 973-93-80869-64-2.
- Ms Anjali Garg (EECE) published a paper, 'Keil software based designing of multistoried car parking system,' in the international journal, IJ-ETA-ETS, ISSN: 0974-3588 | Vol. 5: Issue 2.
- Ms Prabhjot Kaur (EECE) presented a paper, 'Optimization of Power in Cellular Networks using Fuzzy Logic,' at the International Conference on Computing, Communication System and Informatics Management, in July 2012.
- Ms Prabhjot Kaur (EECE) presented a paper, 'Characteristic Parameters Evaluation for MIMO based Communication system,' at the International Conference on Computing, Communication System and Informatics Management, in July 2012.
- Mr Ramandeep Singh (EECE) presented a paper, 'Implementing Smart White LED Lightning System in Buildings using 32-Bit Microcontroller,' in the Proceedings of the International Conference on Advances in Electronics, Electrical and Computer Science Engineering— EEC, in July 2012.
- Mr Subhradipta Sarkar School of Law) presented a paper titled, 'Right to Adequate Sanitation: A Challenge in Post Disaster Situation,' at the National Workshop – From Water to Sanitation and Beyond – Legal, Institutional and Policy Dimensions of Right to Water and Sanitation, organized by the Environmental Law Research Society, New Delhi, held on 27 and 28 July 2012 in New Delhi.



Guest Lectures

Guest Speakers form a valuable real-world adjunct to classroom education in professional colleges and universities. On the same lines, guest lectures are an integral part of the pedagogy of ITMU. Corporate head-honchos as well as doyens from academia are invited to deliver guest lectures at ITMU to benefit the student fraternity as well as the faculty community. They share contemporary business issues or problems, perception of their company or academic body, and the way they deal with them. The Q&A sessions that follow these lectures serve as the ideal platform for the students to supplement their theoretical knowledge with first-hand perspectives from these stalwarts of industry or academia. Most eminent colleges and universities highlight the relevance of these guest lectures, as they also provide networking opportunities in the field. Some of the speakers of the recent past are listed below.

- Professor Hans-Christian Pfohl, Professor for Supply Chain and Network Management at the Department of Law and Economics; Darmstadt Technical University, Germany, visited ITMU to deliver a special lecture, 'Supply Chain Finance – Growing Importance in a Volatile Economy.' **He delivered the lecture on mega-trends affecting value networks, financial supply chain management and supply chain finance.**
- A guest lecture by Mr Karun Sorout, AGM HCL ISD, was organized by the Department of CSE&IT. Mr Sorout provided valuable guidance on current trends in computing technologies, followed by a talk on cloud computing.

LECTURE ON TRIAL PROCESS IN CRIMINAL COURTS

In India, the administration of the criminal justice system is governed by four vital units, namely, the police, prosecution, judiciary and correctional institutions. These components are supposed to work in a harmonious and cohesive manner, with close coordination and cooperation, in order to ensure delivery of justice more effectively, fairly and quickly. With a view to re-looking at the intricacies of the criminal justice system of India, ITM Law School organized a public lecture, 'Trial Process in Criminal Courts.' Mr B S Joon, Director, Directorate of Prosecution, Government of New Delhi, was the speaker of the day. Introducing the speaker, Professor S Shanthakumar, Director, ITMU Law School, highlighted the contributions made by him in some of the most complicated, high profile, and limelighted cases, including the Nitish Katara murder case, Amina Begum kidnapping case, Uphaar fire tragedy, etc. Addressing the gathering, the speaker referred to various provisions of the Code of Criminal Procedure, 1973, and elaborated on the trial procedure, with regard to summons and warrant cases. He also explained the provisions relating to lodging of FIR, complaint to magistrate, issue of process, filing of chargesheet, granting of bail, etc. Mr Joon cited several landmark judgments to highlight some of the major constraints in the criminal justice system. These include : refusal to register FIR, and alternative remedy, consequences of grant of bail in grave and serious criminal offences, overburdening of cases, and factors responsible for delay in conducting trial process of specific offences within the stipulated time. The speaker drew the attention of the audience to some of the loopholes in the system, and suggested possible remedies to them. The lecture was followed by an interaction with the students and other guests present there.

Special Lecture on Juvenile Justice Law in India

The juvenile justice policy in India is largely governed by the constitutional mandate given under Article 15, which guarantees special attention to children through special legislation. Apart from this, juvenile justice in our country was equally influenced by international developments. ITM Law School organized a special lecture on Juvenile Justice Law in India on 17 May 2012, in the Conference Hall of the University. The lecture was delivered by Mr Balbir Singh, Assistant Public Prosecutor, Directorate of Prosecution, New Delhi. Having a long-term association with the Juvenile Justice Board, Mr Singh shared his experiences on various aspects of juvenile justice with the students. He highlighted the safeguards provided under the Act through important provisions with regard to juveniles in conflict with law and children in need of care and protection. Dealing with the provisions of bail, Mr Singh referred to the exceptional circumstances under which bail may not be granted to a juvenile. He also discussed the various types of punishment provided to a juvenile under the law. Highlighting one of the crucial areas, i.e., determination of age of a juvenile, which is the most primary requirement to bring a person under the purview of this Act, Mr Singh analyzed the procedural loopholes in the determination of age. Since the primary objective of the Act is to reform and rehabilitate the juvenile, Mr Singh narrated the working of various homes (such as observation homes, special homes, etc.) constituted under the Act, and gave his observations on the extent to which these homes have achieved the objective of the Act in rehabilitating and reforming the juveniles in conflict with law.

Lecture on Criminal Trial in Appellate Courts

The primary object of a criminal trial is to adhere to the principles of fair trial guaranteed under the Constitution of India. It is, therefore, extremely important to understand the criminal procedural law which has incorporated these principles through its provisions in various stages of investigation, inquiry, trial, and disposal of cases. In continuation of the series of lectures on criminal law organized by ITM Law School, a special lecture on 'Criminal Trial in Appellate Courts' was delivered by Mr Sanjay Soni, Additional Public Prosecutor, Directorate of Public Prosecution, New Delhi, on 18 May 2012, in the Conference Hall. Addressing the students of law, Mr Soni explained various stages of criminal procedural law in a simple and lucid manner. Beginning with the investigation procedure, Mr Soni analyzed the provisions relating to charge, filing of chargesheet, framing of charge, statement of accused, examination of witnesses, judgment, appeal, revision and reference. Apart from explaining the provisions from the Code of Criminal Procedure, 1973, the speaker displayed the drafts of appeal, application for condoning the delay, revision petition, etc., of disposed cases, and explained the crucial areas involved in drafting the criminal law. He insisted that the quality of a good lawyer is not only reflected through his knowledge of law, but also his drafting skills. Mr Soni explained the complicated provisions of the Code through many examples, so as to make it easily understandable. He motivated the students to take up the challenges involved in the legal profession.

Admissions 2012

BTech

The decision to reduce the class size, and therefore the intake, and to add the 10+2 marks to its existing criteria of selection for the engineering stream, should be a source of satisfaction for the management, insofar as the intake of quality students in the new academic year is concerned.

'The cream is here,' says Professor Prem Vrat. 'It is our responsibility to nurture talent in our students and make them more employable. This positive development would prove a clincher in attaining what our deep desire is: to make ITM University a centre of excellence in its true sense, and be counted amongst the top 10 leading private universities in India,' he said.

MTech

MTech Admissions, in particular, have been very encouraging. It is no ordinary achievement for a university which is barely two years old to attain what it has: a phenomenal 100% increase in the admissions to the MTech programme. This has, indeed, set a very significant pace for the postgraduate programmes of the university. Kudos to all those who were associated with the programme, in particular those involved in the planning and direction, answering queries, guiding prospective students, and making the process of admission seamlessly efficient.

PhD Programme

The university received a good response on PhD admission this year. The department-wise admissions were as under:

Electrical, Electronic & Communication Engineering - 2
Computer Science Engineering & Information Technology - 3
Mechanical Engineering - 1
Civil Engineering - 2
Applied Sciences & Humanities - 2
Management - 13

MBA

Admissions to the MBA programme have shown remarkable growth. The School of Management has achieved above 90% of its target for admissions, in spite of the difficult scenario for admissions to management courses in the entire country.

BCom

The School of Management has launched a prestigious programme for BCom (Honurs) this year. The syllabi have been designed by experts from industry and academicians of repute. This programme will meet the requirements of linkages with industry, the corporate sector, and institutes of higher learning. It will also enhance the skills required for professional courses like CA, CS, ICWA and CFA.

BBA LLB (Hons)

Admissions to the School of Law programme have been equally remarkable. The school has not only made the projected target, but exceeded it by a good measure. The quality of new entrants has also been greatly enhanced.

New arrivals

Orientation Programme by School of Management

The School of Management hosted a one-day orientation programme on 13 August 2012 for newly admitted students of PhD, MBA, BBA, BCom (Honours). The programme started with the lighting of the lamp by the Vice-Chancellor, Professor Prem Vrat, Registrar, Brigadier (Retd) S K Sharma, and Head of Department, Professor A K Vij. Professor Prem Vrat delivered a welcome address and motivated students with his inspiring words. He emphasized the importance of the holistic growth and development of students, and insisted they unleash their talent and creativity by taking full advantage of various platforms available at the University. After this, Brigadier Sharma familiarized the students with the University, the extracurricular activities, and the various policies applicable to the students. Professor Vij then welcomed the students to the University and encouraged them to work hard and convert their dreams into reality. He exhorted students to work progressively towards their aim, and create and capitalize on all future opportunities. He also introduced faculty members to the students. As part of the orientation programme, Deputy Dean (Academics), Mr Manoj Gopaliya, COE, Colonel (Retd) Bikram Mohanty, and Manager (Administration), Colonel (Retd) J R Sharma were invited to share with students information regarding the course credit system, examination system and discipline respectively. In all, the orientation programme ended on a very pleasant note, and students felt pleased to join as proud members of the ITMU family.

Vice-Chancellor & Professor of Eminence, Professor Prem Vrat during the Orientation Programme of School of Management

Orientation Programme by School of Law

ITMU Law School organized a two-phase orientation programme on 6 and 21 August 2012. In the inaugural phase, Professor S Shanthakumar, Director, ITMU Law School, welcomed the students with an interesting speech. This was followed by an address by Brigadier (Retd) S K Sharma, Registrar, ITMU, who introduced the students to university administrative infrastructure, as also rules and regulations. He stressed upon the need to maintain discipline, and never accept any ragging, as it was totally prohibited in the University and its hostels. Professor Prem Vrat emphasized the fact that being a multidisciplinary university, ITMU had a synergy among different Schools which the students would not enjoy otherwise in any stand-alone law school in the country. ITMU School of Law invited some successful young lawyers associated with leading law firms, whom the students could look up to as role models. Among the guest speakers, Mr Parthsarathi Jha, Associate, Tri Legal, Law Firm, advised the students about dos and don'ts at a law school which would assist in building a successful career. Mr Rahul Sagar Sahay, Founder of Sarthak Advocates and Solicitors, spoke about the large number of opportunities available to the students after the completion of their course. This was followed by an ice-breaking session conducted by the seniors at the Law School, where the freshers got an opportunity to showcase their talent.

The second phase started with an absorbing lecture by Mr Anand Shankar Jha, Advocate, Supreme Court of India. Being a successful mooter himself during his law school days, he gave important tips to the students to enhance their mooting skills. Mr Debanshu Mukherjee, Associate, AZB Partners, advised the students about what they should do to make their CV's attractive. Ms Hoysala Grandhi, Associate, Amarchand Mangaldas & Suresh A Shroff & Co, New Delhi, delivered a talk on internship and externship in a law school. A few students also shared experiences of their internships in various places. There were sessions by in-house functional heads covering various aspects, including academics, grading, examinations, codes of conduct, cultural and sports activities.

Model UN 2012 – A Simulation

'UN Convention to Combat Desertification' took the central stage at ITMU MUN 2012

In a major initiative to shed light on the proceedings of the actual United Nations, and give an idea about how politics and diplomacy are conducted on the international stage, a model UN conference was organized by ITMU. A total of 200 students from various prestigious institutions in the country participated in the event.

'UN Convention Executive Board' Manisha Massey (JMC), Nayanika Verma (Hindu College), Dikshant Manik (Manav Rachna)

Three UN Committees, i.e., the General Assembly, Human Rights Council, and Economic and Social Council were simulated at the ITMU MUN 2012. The conference discussed various global issues, including implementation of the 'UN Convention to Combat Desertification' in countries experiencing serious drought, the human rights situation in Sudan and South Sudan, and employment generation for post-conflict countries, with special focus on economic and social needs.

The 'General Assembly' stressed on the importance of international cooperation and a partnership approach to combat desertification and mitigate its effects in countries experiencing serious drought. They agreed that serious efforts would be needed from all countries, and they should focus on improving land productivity, rehabilitation of land, conservation and sustainable management of land and water resources to protect against land degradation.

Sharing her experience at the ITMU MUN 2012, Swati Mendiratta, third-year student of the Department of Mechanical Engineering, participating as the 'Secretary General' of the ITMU MUN 2012 Convention said, 'It was an opportunity to understand the intricacies of international relations, and the diligence required in negotiations with people from diverse backgrounds with varying points of view. As students, we are all at the middle of our learning curves, and the skills we can acquire at this kind of conference can help us in a lot of unexpected ways in future.'

The participating colleges included SRCC, Delhi, LSR, Delhi, Hindu College, Miranda House, Jesus and Mary College, Delhi College of Arts and Commerce, Delhi Technical University, NSIT, NIT Raipur, GGS IPU, Thapar University and JP, Noida.

Government of Ireland Grants full Scholarships to students of ITM University

Mr Manoj Kumar and Ms Neha Thethi

Two of our students, Manoj Kumar (11CSP011) MTech (CSE), and Neha Thethi (11SEP011) MTech (SE) have been awarded fully-funded scholarships by the Government of Ireland. These scholarships are for pursuing a one-year MSc course in Computing (Information Security & Digital Forensics) at ITB, Ireland. Each student scholarship is worth ₹ 15.55 lakhs, which includes tuition fee, boarding, lodging and medical insurance.

ITMU will also offer an MTech Degree after the credit transfer for the equivalent courses, on successful competition of study at ITB.

Visit to the Parliament by ITMU Law School

Law as a discipline involves a lot of practical training and exposure, and understanding of law cannot be accomplished through law books alone. Hence, at ITMU, we believe in learning law by doing. To that effect, on 12 April 2012, ITMU Law School organized a visit for students to the Parliament through the office of the Secretary-General of the Rajya Sabha. The students were received by Mr Narayanan, Joint Director, Rajya Sabha, and were taken around to places like the Rajya Sabha, Lok Sabha, the Central Hall, etc. Mr Narayanan delivered a special lecture explaining to the students the procedure of law-making, the history of the Parliament, and many other interesting facts and features related to it. Incidentally, the security staff of the Parliament also gave an on-site narration of the attack on the Parliament on 13 December 2001.

Interaction with Police for Understanding of Criminal Procedures

To give the students a feel of the practical aspects of the administration of criminal justice, ITMU Law School is in collaboration with the Police Department, Government of Haryana, for giving practical inputs on various aspects of the Criminal Procedure Code, 1973. To this effect, Ms Sangeeta Rani, IPS, Addl. DCP, has extended her cooperation to the Law School. Mr Dhanesh Kumar, ASI, Palam Vihar Police Station, interacted with the students on 19 April 2012, and explained to them the procedures involved in registering an FIR (First Information Report), making an arrest, and carrying on an investigation. He explained all the procedures involved in apprehending and handling a criminal till he is produced in a court of law.

Gadget Crazy- the Quiz by ISTE-STUDENT CHAPTER

The ISTE-Student Chapter at ITMU organized an innovative quiz named 'Gadget Crazy' for gadget lovers and techies of the college with the guidance of faculty advisors Ms Suman A Bhatia, Mr Om Ji Shukla, and Ms Supriya Raheja on 4 May 2012. It was a team event, and involved the participation of 14 teams, with two students in each team. The quiz mainly consisted of multiple-choice questions about current technological developments and recently launched gadgets. The event accomplished its purpose of raising awareness among the students about the growth of technology and introduction of various gadgets in the market. The quiz was successfully co-ordinated by BTech second-year students Medha Juneja, Priyanka Grover, Oves Khan and Anchal.

The winners of the quiz were Nidhi Manchanda, Nidhi Kant, Priyanka Jain, Neelima Khemchandani, Rahul Malik and Shikha Sharma

'Catch Them Young' – Students' Research Initiative

In what is being seen as one of the most striking initiatives to instil the desire for research in the minds of its students, ITMU has launched the 'Catch them Young' students' research initiatives. In this drive, the students are encouraged, mentored and led to undertake various research and other innovative projects. Here are some of the achievements since June 2012:

Two of the most innovative projects by students Prakhar Pandey and Surbhit Arora have been approved by the Ministry of Micro, Small & Medium Enterprises (MSME) for ₹ 1.50 lakhs each.

Prakhar Pandey's project is for the design and development of a 'Toilet Flush Design Change,' while Surbhit Arora will design and develop a low-cost machine to produce sanitary napkins.

Surbhit Arora (Final year ME)

Prakhar Pandey (Final year ME)

Dhruvay Jain and Gaurav Jodhani's projects have also been approved by the MSME for ₹ 1.50 lakhs each.

Dhruvay Jain's project is for the design and development of a multi-utility loader, while Gaurav Jodhani will design and develop a universal detachable accessory for bikes and scooters.

These projects have been approved as part of the Design Clinic Scheme of the National Institute of Design (NID), Ahmedabad, a nodal agency of the MSMEs for promoting design in industries to enhance the competitiveness of their products across the country.

A project submitted by Himanshu Malhotra, titled 'Economic PUG Machine' has been approved for a total amount of ₹ 1,37,000/-.

Dhruvay Jain (Final year ME)

Gaurav Jodhani (Final year ME)

Other Activities

- An educational trip was organized by Ms Vaishali Sahu (CE) for BTech Civil Engineering 8th semester students and internship student Ms Viktoria Scheff to the 1MGD Water Treatment plant, Commonwealth Games village complex, Delhi. They collected sample from the plant for research work and learnt various methods for treating wastewater.
- Students of the Robotics Society participated in BITS Pilani's Apogee-2012 and IIT Roorkee's Cognizance 2012, and successfully bagged the 3rd position in Cognizance in the event Breachwars.
- Ms Viktoria Scheff, an internship student at ITMU from University of Kassel, Germany, presented a paper titled, 'Department of Sanitary and Environmental Engineering (DESEE), Germany.' She completed her internship on 30 April 2012. The topic of her work was 'Water quality assessment and management for the Delhi stretch of river Yamuna.' She was supervised by Dr Ram Karan Singh and Ms Vaishali Sahu.
- The Skill Development Programme called 'Design Initiation & Industry Alignment Program: Concepts of C, C++, OOPS for software, VLSI & Embedded Engineers' for ECE/EEE students was enabled by Technology Uncorked (TU) trainers.
- The teams of students from Civil Engineering 4th and 6th semesters, led by Ms Manpreet Singh, participated in a folk dance competition in the Elements Culmyca 2012 Techno Cultural Fest held by the YMCA University of Science and Technology on 30 March 2012, and a folk dance competition in SPANDAN, the annual cultural festival of Manav Rachna, on 8 April 2012. The teams won first prize at both places.
- The Robotics Society, under the guidance of faculty advisors Mr Abhishek Pratap Singh and Mr Pardeep Rohilla, organised a seminar on the topic, 'Robotics Day 2012, and Robocon 2013,' on 9 April 2012. The student core team members discussed the rules, guidelines and preparation for future events.
- A student team of seven members, comprising Kriti Arora, Kriti Garg, Mahima Jain, Nidhi Dad, Nidhi Garg, Nisha Kaushik and Ritika Goyal, coordinated by Ms Usha Batra of ITMU, had a wonderful experience at Mayukh 2012, a technical festival at Banasthali University, held on 30 and 31 March 2012. The team participated in various events and won 18 trophies, including the one for 'Best Performers.' The team had a hands-on experience on cracking the aptitude test, designing algorithms, designing websites, and so on. It was a good learning experience in testing its programming skills in designing interactive paint using Java, a working piano using c/c++, among other things.
- The Law School's success in the moot court competitions continues with the team comprising of Mr Apoorv Pandey, Mr Nitesh Srivastava and Mr K S Kathiravan representing ITMU at the First All India Moot Court Competition, organized by Saveetha School of Law, Saveetha University, Chennai, from 19 to 21 April 2012. Mr Aproov Pandey was adjudged the Best Advocate, and Mr Nitesh Srivastava as the Second Best Advocate. The team memorial was awarded the 3rd Best Memorial. Eighteen teams from all over the country participated in the competition.
- A total of 24 students of BTech-Mechanical & Automobile Engineering, and 12 students of Civil Engineering qualified the GATE examination, which is being made mandatory for all engineering students from this year.
- The value-added course on solid works has been completed by 30 students of Mechanical Engineering. Two students of this course, Mr Prakhar Pandey and Mr Himanshu Malhotra, have been placed in ASSOMAC Machine Tools Limited.
- Students of Mechanical Engineering visited Maruti Suzuki India Limited along with faculty members, Mr Ashwini Sharma and Mr Vinkel Arora. The students learnt about sheet metal parts manufacturing, assembly of a car from start to finish, robotic welding, inventory management, material handling, etc. It was an insightful visit, guided by Mr V K Malhotra (Manager-PR, MSIL) which included a company overview, and a visit to the press shop and assembly line, followed by a question and answer session.
- Two final-year students of Mechanical Engineering participated in a drivers' training programme for the SUPRA SAEINDIA competition at Coimbatore on 17 August 2012. Training included theory and practical classes specific to driving a Formula Car.

- BBA-LLB students from ITMU Law School participated in the Department of Computer Science and Systems Engineering, AU College of Engineering, Andhra University, Visakhapatnam, on 29 - 30 June 2012.
- Sulabh Kumar was awarded the Interscience Scholastic Award for a paper titled, 'Design and Development of Dexto-Eka - a Teleoperated Humanoid Robot,' in the Best Presentation/Best Content category at the International Conference on Electronics and Electrical Engineering (ICEEE) held at Jaipur on 29 July 2012.

Paper Published /Presented

- Ms Sveen Nagpal, student of ECE, together with three other students, have co-authored and presented a paper titled, 'Analysis and Stimulation of Low-Leakage 10T SRAM Bit-Cell using Dual-Vth Scheme at Deep Sub-Micron CMOS Technology,' at the Second International Conference on Advances in Electronics, Electrical and Computer Science, held from 7 to 9 July 2012 at Dehradun.

Commendations

- Dhruvay Jain, student of Mechanical Engineering, was awarded a Letter of Appreciation by the Senior Manager of Q/A test centre, VOLKSWAGEN INDIA, for excellent performance and inputs for automation inculcation during his industrial training period. He contributed to the company's working by developing an automated system for data logging using tablets, and also made devices for monitoring and analyzing engine cabinet performance for the purpose of analysis, thus making it cost effective and cost saving.

National Moot Court Competition

❖ Mr Akshay Mehta, Ms Nripri Jolly and Ms Neha Malik, students of School of Law, emerged as Champions in the finals of the National Moot Court Competition on Constitutional Law at Rohtak, organized by the MD University on 29 and 30 of March 2012. Altogether, 26 teams across the country, including top national law schools, participated in the competition.

The hotly-contested final was judged by a panel of eminent jurists, including the former Chief Justice of the Punjab & Haryana High Court, and senior advocates of the Supreme Court. Neha Malik, the researcher of the ITM Law School team, was declared the Best Researcher for her exemplary contribution in formulating the Best Memorial of the entire competition.

Professional Activities ASQ (I)-ITMU Student Chapter Meeting

To pass on the baton to the students, to let them handle the affairs of the Quality Chapter proactively, and plan, organize and participate in the activities of the Chapter and value-added certificate courses, a meeting was held at the Seminar Hall on 29 August 2012. It was attended by a large number of student members and core faculty members. Such students as were not members but keen to register for membership, also participated in the deliberations, with Mr Sachin Garg, ASQ LMC Chair, Delhi. Mr Sachin Garg unfolded the roadmap of certificate courses which would be run for the students.

The VC addressed the Chapter members and urged them to adopt quality in every aspect of their personal and professional lives.

Mr Sachin Garg ASQ (I) LMC Chair, Delhi delivering a session

Institute of Electrical and Electronics Engineers (IEEE)-ITMU Students' Branch: Activities

Chapter members of IEEE during the meeting

The Society held its meeting on 23 August 2012, and formed a new executive committee for the period from July to December 2012. During the meeting, a tentative schedule for the activities of the society was also worked out. It was felt that the society be re-registered in the name of ITM University, Gurgaon, in place of its existing name of ITM Gurgaon. The process for this was initiated.

On 6 August 2012, Assistant Professor Shivhare, the Branch Counsellor, IEEE Students Branch, ITMU, attended an IEEE meeting with the IEEE-USA delegation at Taj Residency, Delhi, on 'High level networking and challenges around engineering faculty development training and hiring.'

Seven member students from ITMU participated at the 18 IEEE-Quarterly Meet and GINI award programme on 11 August 2012 at Amity University, Noida, and took part in various activities. The students were awarded prizes and certificates.

ITM School of Management in 'Samavesh'

Students of BBA and MBA from the School of Management participated in a two-day annual cultural-cum-business event, 'Samavesh,' held at Fortune Institute of International Business, New Delhi. The team secured the best institute trophy for the university, on the basis of overall performance. The team was led by Mr Sanjay Kumar Mangla (School of Management)

Mathemactive

- The Society of active learning, 'Mathemactive,' organized various events in the academic year 2011-2012, like Maths Mania, Mixed Maths, Guest Lecture on 'Way to CAT through Mathemactive' by Mr Neeraj Kukerej, Maths For Survival, Wheel Of Fortune, Ganit Divas, Math Frenzy.

National Law Fest

- Students of ITM Law School have proven that they are second to none even in extracurricular activities. The Indore-based Indian Institute of Law School organized the 'LEX BONANZA,' a National Law Fest, on 28 and 29 April 2012. ITMU Law School fielded an eight-member team comprising Ayush Gupta, Harshit Dusad, Amitindra Aryan, Kriti Goyal, Nikhil Jain, Akshay Mehta, Neha Malik and Nripi Jolly.

The competition witnessed participants from as many as 19 law schools from various parts of the country. In this fiercely contested law fest, ITM Law School stood first in the street play and second in the Law Quiz.

International Internships 2012

- Anuj Mehta, ECE 3rd Year, was selected for summer internship at Etisalat (telecom company), Abu-Dhabi, UAE.
- Abhishresth Deswal, ECE 3rd Year, was selected for summer internship at AUDI, Germany.

Anuj Mehta
09ITMG1114ECE

Abhishresth Deswal
09ITMG1106ECE

Industrial Visits – Have Fun and Learn

Industrial visits represent important activities in any professional programme, and contribute to the achievement of various essential learning outcomes and programme objectives. These help to bridge the gap between the classroom's theoretical knowledge, and the real world's practical skills. The visits also provide first-hand knowledge about the organizational structures and modes of operation of different industries. The scope of industrial visits varies according to courses, and sometimes students are also asked to work there for a day to gain experience. Business students visit big industries, where they are exposed to the process of manufacturing, including packaging, marketing, sales and distribution. HR and operation management students visit all types of organizations, and study the functioning of related departments in detail. Engineering students are taken to different companies and industrial sites as a part of Industrial Visits. Some glimpses of industrial visits of ITMU students are given here.

Industrial Visit to Jay Bharat Maruti Limited (JBML)

Dr Sunanda Vashisth, Ms Pranati Purohit and Dr Ambika Sharma of AS&H Department organized an industrial visit for the second semester Mechanical Engineering students on 21April 2012, to Jay Bharat Maruti Limited (JBML). JBML is the largest joint venture of Maruti Suzuki India Ltd., for manufacturing of sheet metal components, welded assemblies, exhaust systems, fuel neck filler and rear axle assemblies. The operations and facilities of this plant are stamping, welding, pressing-25T to 1200T press and painting. The visit started with the PowerPoint presentation about Jay Bharat Maruti Limited by their HR department, and then the students were taken to the shop floor and briefed about the different types of welding and pressing done there. The students also visited the painting section of the plant, and learnt about the different steps and methods followed for the painting of manufactured parts.

Industrial Visit to RICO Auto Industries Ltd., Dharuhera

An industrial visit was organised by Mr Pradeep Rohilla for BTech Mechanical Engineering students. A total of 60 students, along with five faculty members – Mr Pradeep Rohilla, Mr Om Ji Shukla, Mr Surya Prakash, Mr Ajay Verma and Mr Dinesh Kumar – visited RICO Auto Industries Ltd., Dharuhera, Gurgaon. The students learnt about the High Pressure Die Casting process of various auto parts such as oil pump assembly, fuel system parts, crank cases and covers, cylinder head covers, etc., and the programming part of CNC machines.

Industrial Visit to Hero Moto Corp.

An industrial visit was organized by Mr Ashwini Sharma (Faculty Advisor - SAEITMU) to Hero Moto Corp. on 28 April 2012. Forty students of 1st and 2nd year visited the Dharuhera plant of the company. Mr Naval Kishore (Manager HR) and Mr Pinto Phillip, along with his team from the company, accompanied the students and explained the processes and systems involved in manufacturing the motorcycles.

Visit to Parle Industry

The School of Management augmented the theoretical knowledge of students with practical experience, with an industrial visit to the renowned confectionary manufacturer, Parle Industries Pvt. Ltd., being organized for MBA students on 21 April 2012. The students visited the Parle manufacturing unit in Bahadurgarh, Haryana. The visit commenced with a presentation given by the Human Resource Department about the history of Parle, followed by a tour to the manufacturing unit, where students got an opportunity to see live manufacturing of confectionary products. This was followed by a question and answer session for 90 minutes, which helped the students to comprehend the process and resolve any queries that they had regarding the procedure.

Visit to Parle Industries Pvt. Ltd.

Visit to Mother Dairy Plant at Patparganj

An industrial visit to the Mother Dairy plant at Patparganj was arranged for the MBA students of School of Management, ITMU, on 11 April 2012. Mother Dairy is one of the largest liquid milk manufacturers in Asia. It offers a range of products like flavoured milk, plain curd (yogurt), lassi (buttermilk), sweetened flavoured curd, etc. The students and faculty members were welcomed on arrival by the officer in-charge of the plant. After an initial introduction, a presentation was given by him on how the milk was processed. Students looked at various aspects of the process with a great deal of enthusiasm, and were impressed with the excellent management of the plant. The students found the visit about a vital product of daily consumption very informative.

Dean's List for Semester Result June-July, 2012

The Dean's office publishes the Dean's List after the result of each semester. All students who have scored a CGPA of 9.00 or above, and have passed all courses in one attempt, feature in the Dean's List of that semester. This is printed on the Detailed Grade-Sheet (DGS) of that semester as a mark of distinction. Students featuring in the Dean's List have the following privileges:

- They form part of the Vice-Chancellor's think tank, with whom he has at least one interaction per semester for brainstorming.
- They will have a group photo opportunity with the Vice-Chancellor. The photograph will be displayed prominently.
- Information about them is conveyed to the Training and Placement Office for special consideration during placements.
- They will receive the Chief Guest during the Convocation.
- They will be preferred on all committees of academic relevance.

SCHOOL OF ENGINEERING AND TECHNOLOGY
BTECH PROGRAMME

SEMESTER-II

AAKASH SHEORAN
11MEU009
CGPA - 9.62

VIDHI SACHEDEVA
11ECU170
CGPA - 9.60

SHUBHAM AHUJA
11ECU148
CGPA - 9.50

PULINA KAKKAR
11ECU108
CGPA - 9.28

ROUNAK
11CVU033
CGPA - 9.24

SANDEEP
11-MEU-105
CGPA - 9.22

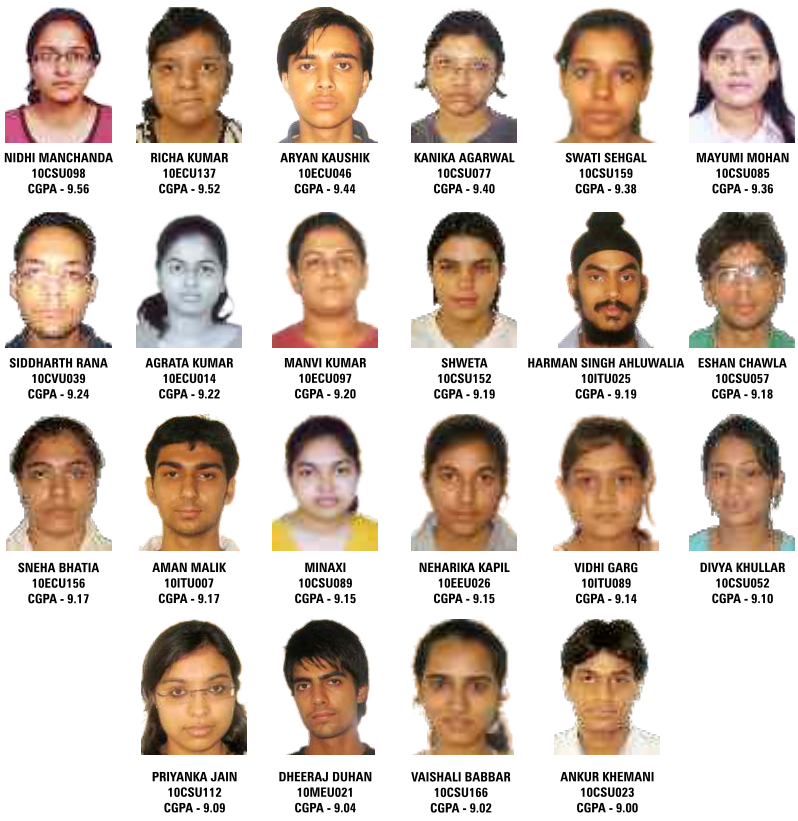
SASHA GARG
11-ECU-140
CGPA - 9.17

PUNEET KUMAR
11ECU112
CGPA - 9.11

GEETIKA GULERIA
11-CSU-061
CGPA - 9.12

KARTIK KHURANA
11-CSU-076
CGPA - 9.09

SEMESTER-IV



NIDHI MANCHANDA
10CSU098
CGPA - 9.56

RICHA KUMAR
10ECU137
CGPA - 9.52

ARYAN KAUSHIK
10ECU046
CGPA - 9.44

KANIKA AGARWAL
10CSU077
CGPA - 9.40

SWATI SEHGAL
10CSU159
CGPA - 9.38

MAYUMI MOHAN
10CSU085
CGPA - 9.36

SIDDHARTH RANA
10CVU039
CGPA - 9.24

AGRATA KUMAR
10ECU014
CGPA - 9.22

MANVI KUMAR
10ECU097
CGPA - 9.20

SHWETA
10CSU152
CGPA - 9.19

HARMAN SINGH AHLUWALIA
10ITU025
CGPA - 9.19

ESHAN CHAWLA
10CSU057
CGPA - 9.18

SNEHA BHATIA
10ECU156
CGPA - 9.17

AMAN MALIK
10ITU007
CGPA - 9.17

MINAXI
10CSU089
CGPA - 9.15

NEHARIKA KAPIL
10EEU026
CGPA - 9.15

VIDHI GARG
10ITU089
CGPA - 9.14

DIVYA KHULLAR
10CSU052
CGPA - 9.10

PRIYANKA JAIN
10CSU112
CGPA - 9.09

DHEERAJ DUHAN
10MEU021
CGPA - 9.04

VAISHALI BABBAR
10CSU166
CGPA - 9.02

ANKUR KHEMANI
10CSU023
CGPA - 9.00

SCHOOL OF MANAGEMENT
BBA PROGRAMME

SEMESTER-II

JASPREET KAUR
11BBA025
CGPA - 9.17

SEMESTER-IV

SHIVIKA SEHGAL
10BBA026
94%

SHEENAM
10BBA025
87.2%

NARESH YADAV
10BBA012
87.2%

NATASHA SAINI
10BBA032
84.4%

SCHOOL OF LAW
BBA-LLB PROGRAMME

TRIMESTER-III

GABRIELLIA RUHIL
11LLB025
CGPA-9.63

MANISHA DASH
11LLB038
CGPA-9.56

MANDEEP KALRA
11LLB037
CGPA-9.43

SUVANKAR MOHANTY
11LLB062
CGPA-9.02

TRIMESTER-VI

NRIPI JOLLY
10LLB015
CGPA-9.53

Dean's List ITM Autonomous Institute - BTech Programme

SEMESTER - VI

SAMTA BAJAJ
09ITMG1478IT
CGPA-9.78

SHRUTI SRIDHAR
09ITMG1183ECE
CGPA-9.76

RITIKA GOYAL
09ITMG1063CSE
CGPA-9.61

NISHA KAUSHIK
09ITMG1053CSE
CGPA-9.53

ANUJ KHURANA
09ITMG1016CSE
CGPA-9.49

RAHUL DUA
09ITMG1164ECE
CGPA-9.46

AKANKSHA MAHAJAN
09ITMG1005CSE
CGPA-9.45

GAGANDEEP
09ITMG1131ECE
CGPA-9.44

ANKITA BANSAL
09ITMG1012CSE
CGPA-9.43

SHIKSHA CHOURASIA
09ITMG1483IT
CGPA-9.42

KOMAL RATRA
09ITMG1039CSE
CGPA-9.40

KRITI GARG
09ITMG1040CSE
CGPA-9.38

NAMAN SHARMA
09ITMG1560CV
CGPA-9.36

SHWETA MAKHIJA
09ITMG1085CSE
CGPA-9.34

SHALIJA RAHEJA
09ITMG1178ECE
CGPA-9.34

SUGANDH CHUGH
09ITMG1188ECE
CGPA-9.34

MAYANK GUPTA
09ITMG1558CV
CGPA-9.33

MANISHA
09ITMG1151ECE
CGPA-9.31

ADITYA DEWAN
08EL204
CGPA-9.30

SHASHANK GUPTA
09ITMG1481IT
CGPA-9.30

NAINI DHINGRA
09ITMG1155ECE
CGPA-9.27

AARUSHI VERMA
09ITMG1383IT
CGPA-9.25

ISHU JAIN
09ITMG1254ME
CGPA-9.25

SUGANDHA RAHEJA
09ITMG1089CSE
CGPA-9.18

ANKITA SHARMA
09ITMG1013CSE
CGPA-9.16

PRIYAN AGARWAL
09ITMG1058CSE
CGPA-9.15

SHIKHA DANG
09ITMG1074CSE
CGPA-9.14

SALONI KHANNA
09ITMG1363EI
CGPA-9.14

HEENA CHANDANA
09ITMG1136ECE
CGPA-9.13

ADITI GOEL
09ITMG1003CSE
CGPA-9.12

HIMANSHU SINGHAL
09ITMG1338EI
CGPA-9.11

SRISHTI BHARGAVA
09ITMG1490IT
CGPA-9.10

SAUMYA TIWARY
09ITMG1175ECE
CGPA-9.10

SIMRAN MALIK
09ITMG1087CSE
CGPA-9.09

PRIYANKA DEY
09ITMG1059CSE
CGPA-9.08

NEHA NARULA
09ITMG1453IT
CGPA-9.08

ASHU JAIN
09ITMG1537CV
CGPA-9.07

IPSA SAWHNEY
09ITMG1425 IT
CGPA-9.02

TAANIYA SACHDEVA
09ITMG1494 IT
CGPA-9.02

DEEKSHA AGRAWAL
09ITMG1413 IT
CGPA-9.01

Making the Underprivileged Smile

ITM students and faculty with underprivileged students

A smile is the most precious gift for any person. The city has so many underprivileged people who have no reasons to smile. But there are a few who are giving their best effort to make it happen, a group of people that has made it possible to give an extraordinary moment of joy to the underprivileged. 'Yukti' – an ITMU students' initiative towards the wellbeing of the underprivileged – organized one such event to spread happiness among children who are physically and mentally challenged.

Towards this endeavour to make a difference in the life of the underprivileged, Yukti invited twenty-one physically and mentally challenged children from Deep Ashram, Gurgaon. The coordinators of Yukti brought the children from the ashram in the University bus in the morning. Their day in the university started with a breakfast organized by the Yukti team. This was followed by drawing and colouring activity, and with drawing kits provided by Yukti, all the children thoroughly enjoyed painting. This was followed by lunch, a magic show and tattoo-making. The magician entertained everyone with his tricks, and the tattoo artist made colourful tattoos for all present.

Spirits are high - painting with his toe

The mentally and physically challenged children were bid goodbye with the distribution of gifts and sanitation kits. The day ended with a certificate distribution to the housekeeping staff who participated in the Education Camp.

It was one of the most memorable days for everyone, with the satisfaction of knowing that a difference was made in the lives of these children.

Free Legal Aid Campaign

Advocates rendering pro-bono services to the clients

A justice delivery system which does not protect everyone's right to legal aid is destined to fail. As a part of the legal fraternity, the School of Management, ITMU began providing free legal aid services to persons who are either unable to afford lawyers, or who do not wish to incur legal costs initially. Even Article 39-A of the Constitution mandates that the State provide free legal aid to the citizens of this country, and ensure that the opportunities for securing justice are not denied by reason of economic or other disabilities. The Supreme Court, in numerous cases, has held right to free aid as a part of Article 21 of the Constitution. In deference to such constitutional obligations, the ITM Law School made an effort to serve society under the auspices of the Free Legal Aid Clinic, inaugurated by Justice P N Bhagwati, former Chief Justice of India. The primary objective of the Clinic was to offer in-house counselling for pre-litigation/conciliation, which would be beneficial to clients. In case conciliatory efforts fail, litigation assistance is rendered in courts of law through the network of lawyers associated with the Law School.

As part of our philosophy, and to generate a wider response, a one-day Free Legal Aid Camp was organised on 5 May 2012. Efforts were made to give adequate publicity towards the programme by distributing pamphlets in the neighbourhood and putting up banners in conspicuous places. The response was overwhelming, as many people from the neighbourhood, including faculty members from the University, queued up to avail themselves of expert legal opinions on a variety of issues. Three distinguished lawyers of the Delhi High Court, namely, Mr R K Mishra, Mr Ravinder Kumar and Mr Ram Kumar Sharma, were generous enough to make their services available for the cause. With the success of this initiative, the Law School is planning similar programmes more frequently in the days to come.

Legal Awareness Programme on Right to Information

A revolution came about in the country with the passing of the Right to Information Act, 2005. It held the government accountable for all their deeds and misdeeds. Information that was once out of reach for the common man was now easily accessible.

ITM Law School organized a Legal Awareness Programme on the Right to Education for the senior students of the Senior Secondary Government School, Carterpuri, Gurgaon, on 5 May 2012, to make the ill-informed citizenry a well-informed one. Ms Surbhi Singh(2nd year LLM), organized the programme, and the key speaker was Mr Muqeet Khan, Programme Officer, MARG. Mr Khan first made the enthusiastic students aware of the importance of the right, then elaborated on the details of the Act, and even taught them how to draft an application for the request of information under the RTI Act, 2005.

Professor S Shanthakumar, Director of ITM Law School, and Mr Subhradipta Sarkar, faculty member of the ITM Law School, were present on the occasion, as was Mrs Nariender Kaur, Chief Judicial Magistrate, Gurgaon, and Secretary, District Legal Services Authority.

The programme concluded with a quiz competition for the students, in which they participated whole-heartedly, winning prizes. The eagerness to know more, and the interest shown by the students, made an hour-long affair a two-and-a-half-hour session. The power to make changes in society, and the importance of this revolutionary right, was conveyed well and was eagerly absorbed by the future citizens of India.

ITMU Law School, in collaboration with Divine Mission Trust, organized yet another such programme on the Right to Information (RTI) on 2 June 2012, at Baljeet Nagar, New Delhi. Mr Mukheet Khan from MARG was the main speaker on the occasion.

Student participant at the RTI awareness programme

Legal Awareness Programme on Right to Education

Education is one of the most important factors that impact the growth and development of a country. It is, indeed, a powerful tool to combat some of the problems deeply rooted in our society. With the recognition of the right to education as a fundamental right, and passing of the Right of Children to Free and Compulsory Education Act, 2009, significant steps have been taken to ensure education for all sections of society.

As a part of this effort, ITMU Law School organized a Legal Awareness Programme on Right to Education for the residents of Kathputli Colony, Shadipur, Delhi, on 30 April 2012. Ms Babita Sharma of LLM Second Year, ITMU Law School, organized the programme, and the key speakers were Professor Ajay Pandey and Professor Priya Gupta of Jindal Global Law School. Professor S Shanthakumar, Director, ITM University Law School, was also present on the occasion. Addressing the gathering, the speakers emphasized the importance of education in the present time, and urged everyone to avail the benefits under the scheme of free and compulsory education. The residents of the colony were enlightened on how law can be an effective instrument of bringing changes in society.

The students of the BBA-LLB Second Year actively participated in the programme, providing legal aid to the residents, who sought their assistance in addressing various problems relating to housing, drinking water and sanitation facilities, ration cards, family pensions and other legal disputes. It was a learning experience for the students to be involved in this endeavour to reach out to those who have been denied justice for various reasons. The programme concluded with a message to the residents to realize the importance of education to ensure a better living and access to justice for all.

A Legal Awareness Programme on the Rights of Domestic Workers

It is a matter of grave concern that the domestic workers on whom we heavily depend for performing household chores are very vulnerable to exploitation – physical, sexual, financial. Though the constitutional courts have shown concern over the matter and laid down guidelines for the protection of their rights, the ground reality has barely changed. Recently, due to the increase in incidents of mistreatment, a bill dealing with the rights of domestic workers has come under discussion. There is also a growing demand from civil society organizations to include domestic workers under the Protection of Women against Sexual Harassment at the Workplace Bill, 2010, which the Ministry of Women and Child Development has agreed to. Considering the issue being a matter of grave concern and our responsibility to act as a legal institution, the ITM University Law School joined hands with Divine Mission Trust to organize an awareness programme on the rights of domestic workers on 12 May 2012. A large number of domestic workers, community leaders and social activists took part in the programme. The main speaker was Mr Bharat from Vishaka, a well-known NGO operating from Jaipur, Rajasthan. He explained to the domestic workers their rights, and the Bills that are pending before the Parliament of India. He urged the participants to be united for the cause.

Legal Awareness Programme Concerning the Rights of Undertrial Prisoners

As a part of our outreach activities with the justice delivery system, students of ITMU Law School had the opportunity to visit the Gurgaon District Prisons and interact with the undertrials on 22 and 23 May 2012. The programme was facilitated by Mrs Nariender Kaur, Chief Judicial Magistrate, Gurgaon, and Secretary, District Legal Services Authority. It was primarily a legal awareness programme, concerning the rights of undertrials. In the course of the programme, students were able to address approximately 1000 undertrial prisoners, in four batches of 250 prisoners each. The students were supported by the prison authorities and panel lawyers from the District Legal Services Authority.

Inter University Basketball and Table Tennis Tournament

ITMU takes pride in providing its students with a wealth of opportunities to de-stress on the playing field, learn new skills or improve in the area of their chosen sports.

ITMU hosted an inter-university basketball and table tennis tournament from 23 to 26 April 2012. The tournament was declared open by the Vice Chancellor, ITMU, on 23 April 2012. The tournament provided an opportunity and a platform to the upcoming sports students from various universities to take their skills to the next level, as also to build inter-university ties to further promote sports in higher education.

The teams that emerged in the fray for the coveted trophies were from Lingayas, College of Vocational Studies, Delhi University, Amity Noida, Ansals Institute of Technology, APJ Satya University, Dronacharya College of Engineering, Manav Rachna, Gurgaon Institute of Technology and Management, Echelon, Alumni Team ITM University, ITM University Team A &B, Lady Harding Medical College, and ITMU women's team.

ITMU teams fought tooth and nail to achieve a victory on their home ground. The final match of boys' basketball was played between teams of ITMU and Manav Racha, and the trophy was shared by both teams. ITMU girls' basketball team defeated the team from Lady Harding Medical College in the finals, to become the winners. The table tennis tournament for boys and girls was won by the ITMU teams.

Each team exhibited exemplary sportsmanship during the tournament. We congratulate the teams for winning laurels for the university through their dedication, hard work and skill.

The sports calendar for the odd semester rolled out with table tennis, carrom and chess tournaments as the first competitive sports events of the year. The competitions were held from 6 to 9 August 2012. The competitors and their supporters thronged the sports hall to see their teams prevail over their opponents. The level of skills exhibited during the tournaments was of a very high order, and some of the students performed like champions.

Table Tennis Tournament

The ME team of boys, comprising Gaurav Gupta, Nishant Arya, Tushar Batra, Anand Shivpuri and Ishu Jain, prevailed over the EECE department to win the coveted tournament. The results of the girls' teams were: 1st, Soumya Kalra (CSE dept.), 2nd, Deeksha (ME dept.), 3rd, Ishika (ME dept.).

Carrom Tournament

A carrom tournament was conducted from 6 to 9 August 2012. In this hotly contested event, the IT girls' team, comprising Anchal and Ambika, and the IT boys' team, comprising Saransh, Sachin Kumar, Shatank Gupta and Rishu Garg, prevailed over the Civil Engineering department team, winning the top spot.

Chess Tournament

A chess tournament was conducted from 6 to 9 August 2012. Anant Vijay Singh from the EECE department was the winner, and Saurav Singh, also from the EECE department, was the runner-up. The winner from the girls' teams was Akriti from School of Law, while Anjali from the CSE department was the runner-up.

WILL: What One Needs to Know

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Every person who is an absolute owner of property has complete freedom and right to enjoy his property during his lifetime. He also has the right to decide who can enjoy his property after his death. He can exercise this right by executing a Will.

It is necessary that every person after attaining the age of 50 or 55 executes a will. By executing a will a person does a great service to his loved ones. He thereby avoids fights, disputes and other unpleasant incidents between his close family members over distribution of his property after his death.

If a person dies without making a Will, he is said to have died intestate. In such a case, his property will be inherited by his heirs in accordance with the law of succession applicable to them. It is called Intestate Succession. If he has executed a Will, his property shall be distributed as per the terms of his Will, which is known as Testamentary Succession.

Definition of Will

According to the Indian Succession Act, 1925, 'Will' means the legal declaration of the intention of a testator with respect to his property, which he desires to be carried into effect after his death.

A will must be executed properly, or it may become invalid. The problem with an invalid will is that it is not known that the will is invalid until the beneficiaries of the will try to give effect to it, which occurs upon the author's death. This makes a revision or correction of the original will impossible. Therefore, the proper execution of a will is very important as to its legality. A will can be executed by an owner of the property on his own without anyone's help. If one has extensive properties, and wishes regarding the disposition of it are complex, it is better to have a lawyer draft the Will.

Essentials of a valid will

1. There must be legal declaration, i.e., the document purporting to be a will must be in conformity with the provisions of the law. It must be made by a person competent to make it.
2. The declaration must be with respect to the property of the testator. (Mere use of the word 'Will' cannot make a document a will if it is not a testamentary declaration disposing of the property).
3. The declaration must be to the effect that is to operate after the death of the testator, i.e., it should be revocable during the life of the testator.

If any of the above three essentials is lacking, the document is not a Will.

Who is competent to make a Will?

S.59 of the Indian Succession Act provides that every person who is of **sound mind** and is **not a minor** can make a Will.

Minors: According to the Indian Majority Act, 1875, a minor is a person who has not completed the age of 18 years. Any person who has competed the age of 18 years is competent to execute a Will, and has testamentary capacity.

Persons of Sound Mind: Under section 59 of the Indian Succession Act, the existence of sound mind is a sine quo non for the validity of the Will. The testamentary capacity as to soundness of mind does not have any absolute standard. It has to be judged with reference to a particular testamentary document. Generally, Wills are not made by young persons who are totally fit. It is made by persons who are aged and bedridden. Hence, the law does not expect that the testator should be in great health or in a state of mind where he may give complicated instructions as to the disposition of his property.

A sound disposing mind means:

1. The testator at the time of making a Will should have the capacity to appreciate the fact that he is executing a will.
2. He must understand and recollect the extent of his property.
3. He must understand the persons who are going to be the beneficiaries, and their extent of claims.
4 He must also understand who are excluded from the Will.

Deaf or Dumb or Blind Persons: Persons who are deaf or dumb or blind can also make a will if they are able to know what they do by it.

Mentally Ill and Insane Persons: Every person is presumed to be sane until the contrary is proved and has the capacity to execute a will. Even a person who is ordinarily insane, may make his Will during the interval in which he is of sound mind. A Will made by a person who is intoxicated or is suffering from any other illness, which renders him incapable of knowing what he is doing, is invalid.

Execution of a Will

1. The will must be signed by the testator. If the testator is unable to write, he may execute the will by a mark (thumb impression), and by doing so his hand may be guided by another person. It may also be signed by some other person on his behalf in his presence and by his direction. It is not necessary that he must sign at the end of the will or every page of the will. He can sign anywhere in the document but it should be very clear that by signing he intends to authenticate the contents of the will.

2. The will must be attested by two or more witnesses. Each witness must have seen the testator signing the will. If it is already signed, a personal acknowledgement from the testator that he signed the will is sufficient. It is not necessary that both the witnesses have to sign at the same time. It is also not necessary that the attesting witnesses should know the contents of the Will.

3. Any person who is attesting the will as witness, the wife or husband of such a person, or any person claiming under either of them cannot be a beneficiary under the will.

4. A Will may be made in any form and in any language. No technical words need to be used in making a Will.

5. A Will need not be stamped. This means, there is no need of executing the Will on Stamp Paper. Writing a Will on plain paper is sufficient.

Registration of a Will

Under section 18 of the Registration Act, the registration of a Will is not compulsory. However, it is advisable to register it, as it provides strong legal evidence about the validity of the Will. Once a Will is registered, it is placed in the safe custody of the Registrar and therefore cannot be tampered with, destroyed, mutilated or stolen. It is to be released only to the testator himself or, after his death, to an authorized person who produces the Death Certificate.

Revocability of will

A will can be revoked or altered anytime, and any number of times, during the lifetime of the testator.

After executing a will, if the testator wants to cancel the will, it can be expressly revoked by a revocation deed which has to be executed in the same way as the will itself.

Subsequently, if he executes another will, he can introduce an express clause revoking the previous will. If there is no express revocation, then the previous will becomes invalid to the extent of its inconsistency with the latest Will. This is known as an implied revocation.

If the will is destroyed with clear intention of revoking, it stands revoked. If any alteration, correction or erasures are made in the will, the testator and the attesting witnesses should put their signatures in proximity of the alteration.

Invalid Wills

1. Where a property is given to a person by a particular description, and if there is no person in existence at the testator's death who answers that description, the will is invalid. (Example: A writes a Will bequeathing his property to the son of his son. If at the time of death of A, his son has no son born to his son, then the Will becomes invalid)

2. Where a Will has been caused by fraud or coercion, basically not by free will, it is invalid. (Example: A, falsely and knowingly represents to the testator, that the testator' s only child is dead, or that he has done some undutiful act, and thereby induces the testator to make a will in his, i.e. A' s, favour; such a Will has been obtained by fraud, and hence is invalid)

3. Where a will has been made under force or fear of death, or of bodily hurt, it is invalid (Example: A threatens to shoot B, or to burn his house, or to cause him to be arrested on a criminal charge, unless he makes a bequest in favour of C. B, in consequence, makes a bequest in favour of C. The bequest is void, the making of it having been caused by coercion)

4. Where a will is made under undue influence, it is invalid. Undue influence is said to be exercised when the relationship existing between the two parties are such that one of the parties is in the position to dominate the will of the other and uses that position to obtain an unfair advantage over the other.

5. Where a will is uncertain regarding subject or object, the Will is invalid. Subject refers to the property and object refers to the beneficiaries. (Example: If a testator writes, after my death the property mentioned under 'schedule A' should go to X, and there is nothing as 'schedule A' in the Will, it is invalid)

Beneficiaries

A bequest can be made to an infant, an idiot, a lunatic or other disqualified person, or to any person, as it is not necessary that the legatee should be capable of assenting to it. From the words used in the Will, the intention of the testator should be clear about the persons who are going to be the beneficiaries.

Burden of proof

A Will that has been proved to be duly signed and attested will be presumed to have been made by a person of sound mind, unless proved otherwise. The burden of proof to prove that the Will was made out of free volition is on the person who propounds the Will. Since a testamentary disposition always speaks from the grave of the testator, the required standard of proof is very high.

Biofertilizer

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Biofertilizers are microorganisms (bacteria, cyanobacteria and fungi) which enhance the availability of nutrients, like nitrogen and phosphorus, to the crop plants. In addition to nitrogen/phosphorus they also provide organic carbon, various growth promoting substances and improves the physical properties of the soil. With the introduction of high-yielding crop varieties, demand for chemical fertilizers has been increased several folds. Further, crop plants are able to use only about 35% of the applied chemical fertilizer as considerable amount is continuously lost from the soil due to leaching, denitrification and volatilization. There are also many ecological limitations to the heavy use of chemical fertilizers- the concentration of toxic nitrate has been found to be increased in water bodies near heavily fertilized fields. Denitrification of nitrate produces nitrogen gas and small amount nitrous oxide (about 10 %) and the latter being a greenhouse gas results in global warming and health hazards.

Unlike chemical fertilizers which have various environmental impacts, biofertilizers are economical, eco friendly and have long-term sustainability. For optimum crop yields biofertilizers are generally used in combination with the chemical fertilizers. Some micro-organisms with practical or potential application as biofertilizer are Rhizobium, Nostoc, Azotobacter, etc.

Rhizobium *sp.* are symbiotic N_2-fixing bacteria forming pink coloured root nodules in leguminous plants, like gram, mung, pea, pigeonpea (arhar dal) (Fig. 1). These bacteria inside the nodules fix atmospheric nitrogen into ammonia with the help of the enzyme nitrogenase. The estimated N_2 fixed by *Rhizobium* ranges from 50-150 kg/ha/year and increases the yield by 10-15%. The culture of ***Rhizobium*** is grown in incubators or fermenters and mixed with a carrier material like peat. Seeds coated with this biofertilizer are used for sowing in the fields.

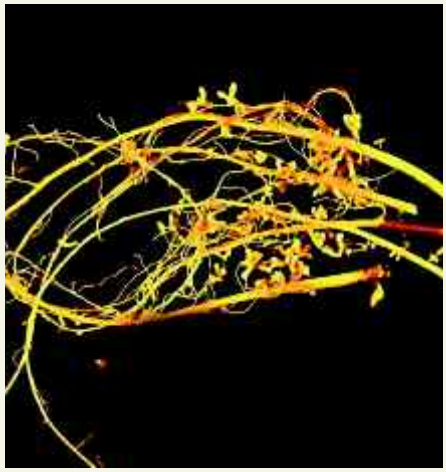

Fig.1 Soybean root nodules.

Azotobacter is a free-living N_2-fixing bacterium used for the crops wheat, rice, and vegetables and is capable of fixing 15-30 kg N/ha/year. *Azospirillum* sp. are found in association with roots of many plants of grass family like jowar, wheat, bajra, etc. and provides about 15-30 kg N/ha/year.

Cyanobacteria (blue-green algae) are photosynthetic, prokaryotic microorganisms and many of them fix atmospheric N_2, e.g. *Nostoc, Anabaena, Aulosira, Tolypothrix,* etc. (Fig.2). Cyanobacterial biofertilizer are preferably used in tropical rice fields where they contribute 20-30 kg N/ha/year. Moreover, after application for 3-4 successive years in the field, a sufficient population builds up and their further application in the field is not required. They are also useful in reclamation (curing) of alkaline and saline soils. Cyanobacterial biofertilizers are grown in small tanks or ponds in the sunlight and the sun-dried biomass is used to sprinkle the rice field.

Azolla is a water fern harbouring symbiotic cyanobacterium *Anabaena azollae* in the cavity of its leaves. It is widely used as biofertilizer in rice fields of temperate countries, like Vietnam (Fig. 3).

Phosphate Solubilizing Bacteria (PSB) are species of *Pseudomonas, Bacillus, Thiobacillus,* etc. which convert insoluble non-available inorganic phosphorus (rock

Fig .2 Nostoc

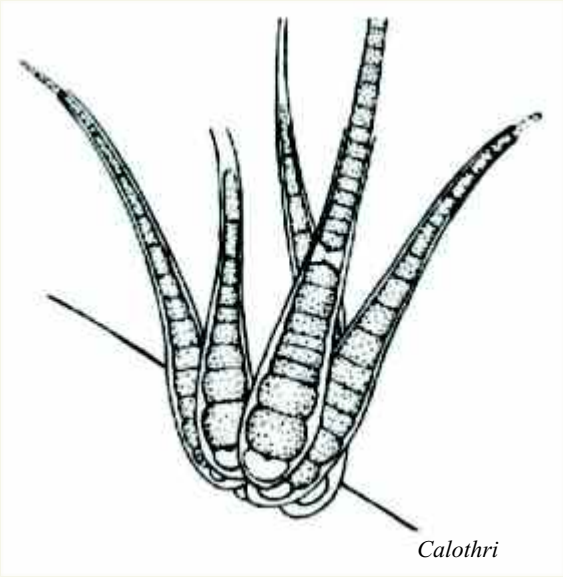

Fig. 2 Some biofertilizer strains of cyanobacteria.

Fig. 3 Cultivation of Azolla in cement tank.

phosphate) present in the soil into soluble phosphorus utilized by the crop plants.

Vesicular Arbuscular Mycorrhizal (VAM) Fungi e.g. *Glomus*, are found in association with roots of plants; some at the surface of roots (ectomycorrhizae) whereas others inside the roots (endomycorrhizae). They have multiple benefits converting non-available phosphorus into available forms, producing growth promoting substances and protecting crop plants against soil pathogens. These fungi are yet to be exploited on a commercial scale and in USA they are applied in Citrus crop by inoculating the seedlings with VAM.

Thus, if a part of the chemical ferilizer demand of the crop plants could be met through biofertilizer, a major input constraint can be overcome. Though, field inoculation experiments are limited, the biofertilizer is expected to make important contributions to agriculture. In the long term, the modern methods of biotechnology will greatly improve the biofertilizer technology. It would be possible to impart herbicide and insecticide resistance to promote competition against weedy microorganisms in the fields. For wider exploitation of the biofertilizer technology in agriculture, a coordinated research in the laboratory and field is necessary.

Fig 5. Dried cyanobacterial biofertilizer flakes.

Fig 4. Azolla cultivation in glasshouse.

Cloud Computing

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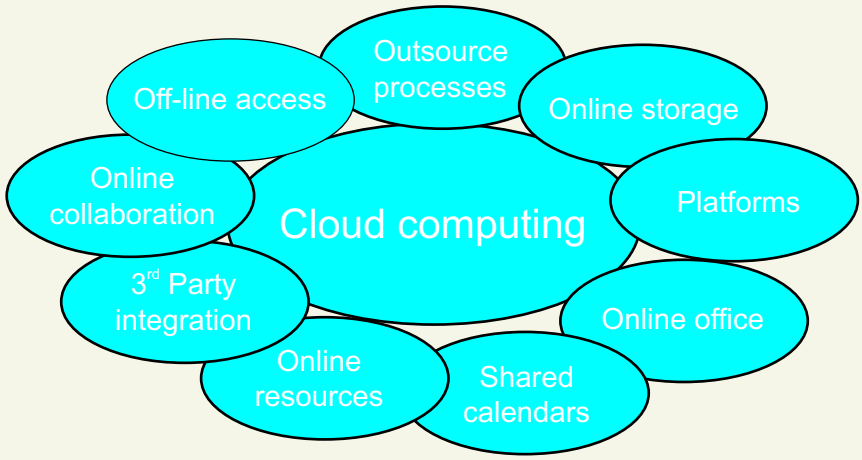

Basically, cloud computing is the evolution of several initiatives that are converged from virtualization, distributed application design grid and enterprise IT management to enable a more friendly and flexible approach for deploying and scaling applications.

What is Cloud Computing?

Cloud Computing is the buzz word doing the rounds in IT circles. CIOs/IT Managers look towards the cloud as the answer to today's growing service delivery demands. It provides automated management processes, and takes care of core essentials in IT, that is, efficiency, agility and reduced costs. This is a general term for anything that involves delivering hosted services over the internet so it becomes easier for IT organizations to deliver the services needed by business in a given timeframe and at a reasonable cost. Definitions may vary, but to put this in a more user-friendly language, cloud computing is a model where all IT resources – namely, servers, network devices, storage and applications – are available to end-users over the internet. Cloud computing is classified under two categories – public cloud and private cloud.

A public cloud is where resources, such as storage and applications, are made available to users over the internet. The resources are controlled by the third-party, and access is normally given as a web service. A private cloud is one in which a company controls the data and resources, and access is limited to a set of people. A private cloud is normally hosted inside the firewall of the company or department that provides user access in a secure environment. A third category called the Hybrid cloud model is also available, which is a mix of the above two categories.

Typically, cloud computing services consist of three basic types:

Infrastructure-as-a-Service (Iaas)

IaaS is a model that replicates the functions of an entire datacenter. An organization outsources the equipment used to support operations, including storage, hardware, servers, system software and networking components. The service provider owns the equipment, and is responsible for housing, running and maintaining it. Some examples of organizations providing IaaS are Amazon's Elastic Compute Cloud (EC2), IBM, Verizon Business, etc.

Platform-as-a-Service (PaaS)

PaaS provides virtualized servers on which users can run existing applications or create new applications without worrying about OS, storage, server hardware, load balancing or computing capacity. A developer can create applications on the provider's platform over the internet. PaaS providers may use APIs, website portals or gateway software installed on the customer's computer. GoogleAPP's is an example of PaaS. The cloud does not offer standards for interoperability and data portability, and developers need to know this. Other popular PaaS providers are Microsoft's Azure, and Salesforce's Force.com.

Software-as-a-Service (SaaS)

SaaS is the best known and is a common

form of cloud computing service. This provides all the functions of running a sophisticated traditional application through a web browser. SaaS removes many hassles like maintaining application servers, storage, application and other common concerns. The end user is free to use the service from anywhere on the internet, since the service provider hosts both the application and the data. Some examples of SaaS are Google's Gmail, Google Apps, IM from AOL, Yahoo and VoIP from Skype, etc.

Adopting the Cloud

Creating a cloud environment for an enterprise is a very carefully planned exercise, as it requires a broad vision from IT managers on determining how the enterprise can use it diligently. IT managers have to take the role of pioneers who can bring organizations to new levels of performance and efficiency through IT, and at the same time focus on improving services, reducing costs and managing the risks involved in this ever-connected world. As cloud computing can handle shift from 'capacity' to 'capability' on demand, enterprises are adopting the cloud quickly to fulfil their service delivery expectations. Adopting a cloud requires a plan and a good design, which primarily consist of:

Assessment: The first step would be to assess meticulously, and generate a clear set of use cases and requirements. This should be attached with an inventory of required platforms, OS and a wish-list of services under different tiers.

Roadmap: It is essential to create a roadmap for achieving success, say two years down the line, with clearly defined and attainable quarterly milestones. Also, success is ensured by having an integrated vision and buy-in from top management down to all business units across the enterprise.

Integration: A cloud can touch upon many aspects of IT, so establish a standard interface by identifying what services will integrate with the solution. It is important to document the requirements and interactions while establishing the standard interface.

Deployment: Deployment done in a phased manner is recommended, starting with services that are mature and slowly branching out to take in other applications. Building on robust capabilities to begin with, will help ensure that the infrastructure will sustain.

Success in cloud computing depends on the maturity and standardization of the existing processes. Standardized processes and services can be automated and moved to the cloud more quickly than processes that are still half-mature or are still in testing stages. Hence, standardization and automation are two main elements that play an important role in achieving success while adopting a cloud, as these transform the enterprise from a custom environment to an environment that has automated delivery of IT services. Further, standardized and automated services provide the benefits of simplified management, accelerated deployments, enhanced efficiencies, and reduced costs, since they require less human intervention.

How Does Business Value Get Enhanced?

Basically, cloud computing is the evolution of several initiatives that are converged from virtualization, distributed application design grid and enterprise IT management to enable a more friendly and flexible approach for deploying and scaling applications. Businesses normally look for effective and efficient service delivery, to improve the value of IT in their enterprise, and less or no challenges in managing their day-to-day IT setup. Cloud computing can help organizations to do away with many of these hassles in delivering IT services in an amazing way, as the cloud provides a dynamic environment in which IT applications and infrastructure, and is available 24x7, irrespective of the location. Business value is also enhanced by faster service delivery that results in customer retention, positioning in the market and the leverage to expand business horizontally. Businesses adopting the cloud can ignore the challenge of data growth and scalability, and concentrate more on services that provide the highest value, without concerns on under-utilized IT capacities.

Cloud computing reduces TCO which drives higher profits and provides the answer to the fundamental question: 'How do I deliver more with fewer resources?' Cloud computing greatly reduces IT labour costs, and promotes effective use of technical staff in the organization. Adopting a cloud for the enterprise with proper planning, design and automation gives a competitive edge in many ways. Some proven benefits are:

Operating cost replaces capital cost of the data centre. Due to reduced hardware costs; reduced capacity and storage needs; technical risks are minimized. Productivity increases better user experience; and makes it environment friendly (less space, less power, etc.).

Security is also very important in cloud computing, and all issues related to securing an enterprise data centre also apply to the cloud. To consider how a cloud is right for a business enterprise, the first aspect to identify is how the cloud will fit well into the existing business architecture and business strategy.

Understanding the business operation and the current situation, identifying opportunities for change by understanding efficiencies, gaps and risks, create a plan for transformation and migration.

The reason that many enterprises are thinking of implementing a cloud model is that it reduces time in service delivery and provides an environment of flexibility and agility. Users are happy, as they keep getting the services as they wish, at their own convenience.

Conclusion

Many organizations are moving towards the SaaS cloud model, and adoption of this type of service has been higher than the other two types, IaaS and PaaS. This is primarily because the SaaS cloud model offers the same benefits of a traditional IT unit in terms of services and solutions for the management. Further, the SaaS model offers many other advantages by significantly reducing capital expenses. Perhaps this can be a good enough reason. IT Managers/CIOs have to address many factors and challenges before choosing the right cloud model for their enterprise. This is critical, as the chosen cloud model is likely to drive many other decisions in running the enterprise and business, so it is imperative to first answer this important question - Will a cloud model make sense for my business? The best approach would be to look for solutions in all the cloud models and types, and choose the one that provides maximum business value.

APP-ED OUT!!

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(10-CSU-32)

FACT- There are 75,000 apps in the Windows Phone marketplace, 4,30,000 on Google Play, and 6,10,000 in the Apple app store.

Phew! And you got tired of scrolling just through the top 50 apps list. Have you ever realised that your smartphone is only going to be as smart as you are? After all, it's you who chooses which apps are to be installed on it. Let's be honest, don't you feel dumb when a cheaper app on your friend's average-priced phone beats the pants off anything on that highly expensive phone of yours? The truth is, that the true power of the apps is to customise your phone to be utilised to its complete worth and capability.

But do you have the knowledge of all those apps to make sure that you have the best ones on your phone? Is that even statistically possible?

Take a look at those numbers above and you know that unless you know the exact name of the app, even the most general search might not give you the desired results. So, how does a developer get the customers to see his amazing app that can be better than 10 other apps on your phone? The facts say that it might not be possible at all. If we do the math, assuming that 90 per cent of the apps are useless and 10 per cent genius, even then you are left with 1,50,000 apps !

Your initial excitement of loading your new phone with apps dies out within a month at most. Within three weeks, your daily use of apps falls to four or six. The life of apps is, at the most, a few days, or sometimes not even that. After that, you and your device both get bored with them.

But this cycle will come to an end in near future. Phone manufacturers and operating system programmers are working at the speed of light towards this. Smartphones will observe and learn what we do and give us what we need and eliminate our need for installing and deleting apps. We might not even need the marketplaces for apps then.

Until then, wishing good luck to the apps!

Watermarking Using Support Vector Machines (SVMs)

Ashish (10CSU034)

Anshul (10CSU027)

Lately, the computer-networking facilities for data interchange have been substantially improved. In addition, high-speed external devices for large data storage, including DVD/CD recorders and external hard drives, have become rather inexpensive. Consequently, the spread of the illegal reproduction of multimedia data has had a serious impact on the protection of multimedia intellectual property rights. Currently, watermarking technology is the most efficient way to protect the ownership of multimedia data. Numerous watermarking methods have been proposed and applied in diverse areas. In ubiquitous multimedia applications, colour images are basic components of multimedia systems, such as video systems based on current video compression standards, MPEG-1, MPEG-2, MPEG-4, and further MPEGs. Hence, it is crucial to first develop effective watermarking techniques for colour images before devising video watermarking techniques.

Several existing watermarking methods, such as FCT and FWT, have gained prominence for the protection of the ownership of colour images. Kutter exploited a pseudo-random number generator to locate a set of positions to hide a watermark. With the amplitude modulation, three factors, namely the luminances of a colour image, a watermark, and a scalar, are fused to modulate the blue channel of the corresponding RGB colour image. This method requires the mandatory constraint that the first two bits, termed preamble information, of a watermark must be known prior to watermark extraction. The remaining bits of the watermark represent the signature of the owner's image. The constraint is employed to determine an adaptive threshold (a constant) to be used in the estimation for the embedded signature. This preamble information must be provided during watermark extraction. Unfortunately, Kutter's method is rather fragile, since the adaptive threshold is a constant. Specifically, it takes the constant as a threshold, and easily causes estimation errors under common attacks during signature estimation. Consequently, the robustness of this method is reduced markedly.

Yu et al. proposed a neural-network-based method that enhanced the robustness of Kutter's method. A major difference between these two methods lies in the calculation of the adaptive threshold. Yu's method calculates the adaptive threshold by using a non-linear mapping which is realized by a neural network with multilayer perceptrons (MLPs). Specifically, a trained neural network (a nonlinear mapping) memorizes the relationships between the watermarked image and the corresponding original image. This method exploits the trained neural network to estimate the original pixels, and then calculates the difference between each watermarked pixel and its corresponding (estimated) original pixel. It should be noted that this difference can identify the amplitude modulation for a pixel. Subsequently, the watermark can be estimated based on the sign of the differences without the need to refer to the corresponding original image. A sliding window with a symmetric-cross shape is utilized to collect the training patterns.

Unfortunately, the performance of this method cannot be significantly improved upon because it still fails to overcome the natural limitations of the back-propagation learning algorithm. When the learning algorithm is employed to train MLPs, it is often stuck on local minima. Recently, SVMs have been successfully applied in various applications including pattern recognition, classification, function estimation, medicine, and so on. The theory of SVMs is based on the concept of the structural risk minimization using the Vapnik–Chervonenkis (VC) dimension.

A significant advantage of the SVMs is that their performance and complexity are independent of the dimensionality of the input domain. Much of the literature seems to indicate that the performance of SVMs is superior to that of traditional learning models. Particularly, the SVM solution for the classification problem outperforms the solutions of traditional neural networks, such as MLPs and radial basis functions. Here, the extraction of a watermark can be regarded as a classification problem for binary patterns. Therefore, approaches for solving classification problems can be integrated into the development of a watermark-extraction procedure.

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'A new robust watermark embedding into wavelet DC components,'

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[3] www.wikipedia.com, 'SVM'.

The Big Fat Indian wedding!

Ayushi Garg
(10CSU041)

What's India without opulence? And, what better way to define opulence than the obvious multi-billion-dollar Indian wedding industry? Believe it or not, it is easier to step together into fire for a couple than to decide to marry!

We are the bosses of the universe when it comes to having an exhibition of our wealth (though it may be non-existent for some of our poor wretched brothers, but that wouldn't stop us from spending a penny less on less-deserving flowers or the perfect wedding trousseau from the shelves of Sabyasachi Mukherjee or Rohit Bal or Ritu Kumar). It doesn't matter how much a person has or what the relevance of a fancy wedding (amongst hordes of people whom you would not see once after the wedding is over) is. But you do invite them…just to please those fastidious ears of yours ('you know Mr Kapoor? He spent 12 crores on his daughter's wedding;' or, 'Mr Sahni had celebrities performing at his son's engagement ceremony.' Not hard to hear these phrases). So much so that mothers' brains are fed by dreams of seeing their sons ride the carriage being driven by at least 4 horses (though the lesser lords try to make do with just one horse) or their daughters wearing the traditional Indian ensemble of a lehenga-choli laced with golden threads. After all, it will mortally wound the fake evicted shallow selves of these people.

What harm could a little extravagance cause, you may ask. Well, in a nation where lakhs of people cannot afford two squares meal a day, it is actually no big deal (for the hosts) to waste so much food (an amount that can feed at least 30 hungry people) in the divine, lavish trend of thirty-six courses – minimum. The evening has to be perfect, from the costliest caterers to tend to the food, to the most exotic of locations, to the wedding gifts, or the most beautiful decorations.

According to wedding statistics, on a single night (week-long in some cases, though) at least Rs 100,000 crores are spent, which includes about Rs 10,000 crores spent on apparel, and Rs 30,000 crores spent on jewellery, per year, and of course the dowry. An Indian parent toils through his job to give away his daughter in a shining four-wheeler, laden with crores' worth of jewels. And, if the toil is not enough, what are banks for?

And who can forget the loud music blaring through the streets as the wedding procession passes by, irritating your nerves. Never mind the traffic jams owing to the necessity for people to shake a leg and express their joy in the midst of waiting traffic. Of course, the world has to respect my happy day, and how much harm could waiting in a car for a mere 20 minutes cause, anyway? At most, a person could die, but then again, there is a surplus on this earth.

In the end, it really doesn't matter how much your capacity to waste on an exemplary wedding is, what would actually be nice would be to put that much more thought in the actual marriage than in the preparation of the commencement!

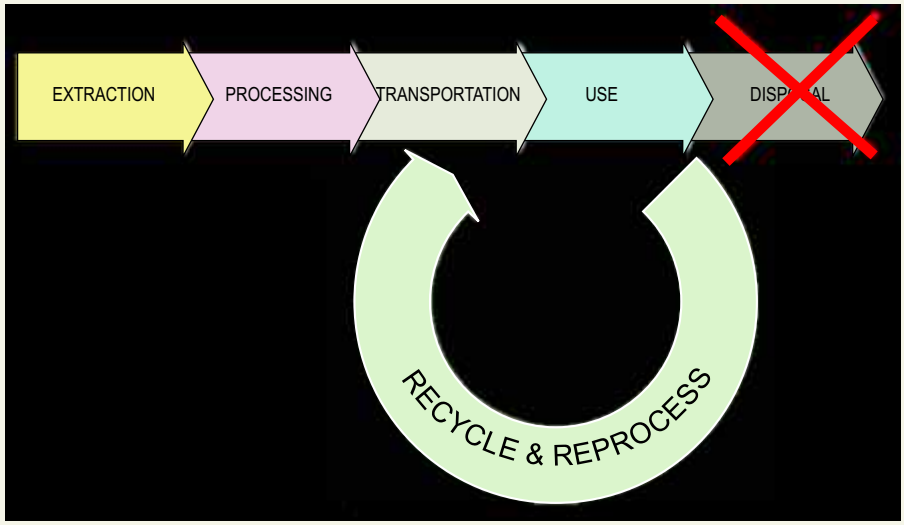
Green Technology in Infrastructure

-Mr Nipun Verma and Ms Isha Verma
Assistant Professors,
Department of Civil Engineering

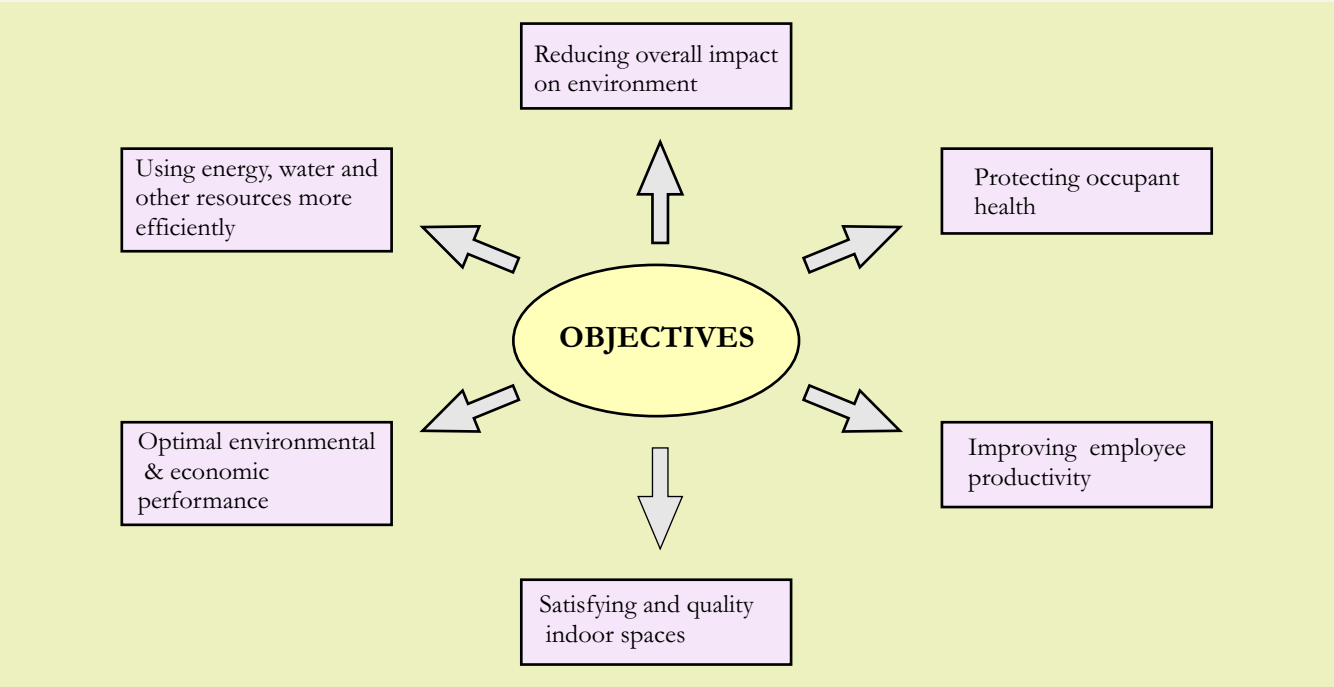
Green building concepts deal with the optimum use of natural resources for the development of infrastructure. The low-cost, eco-friendly house is a modern construction method which uses locally available material and unskilled labour, and also reduces the construction time. Similarly, use of recycled plastic, recycled aggregates and municipal waste for the construction of pavements has considerable effect on the environment of the earth. Another advanced method is the construction of the low-carbon building, which uses sustainable materials like blended cement, compacted fly-ash blocks, low-energy intensity floor and roofing system, rammed-earth walls and stabilized mud blocks, etc. This ultimately results in reduction of greenhouse gases, which will help to reduce greenhouse effect.

In today's world of climate change and high energy prices, it is critical that buildings use as few fossil fuels (including coal-generated electricity) as possible to 'future proof' the home against unpredictable and rapidly rising prices.

Fossil fuels currently provide 95 per cent of the world's commercial energy supply, whereas renewable energy sources supply less than three per cent. If we are going to approach our future with foresight, it would be wise to reduce our consumption of fossil fuels and invest in renewable energy at home as soon as possible. The green technologies adopted in infrastructural facilities emphasize on the 'three R's' of environmental conservation – reduce, reuse, recycle.



The term 'green' refers to environmental friendly practices, from building design to the landscaping choices. It also encompasses energy use, water use, and storm water and wastewater reuse. Its cost may be more up-front, but, in the long run, it will save money through lower operating costs over the life of the building. The green building approach applies a project lifecycle cost analysis in determining the appropriate up-front expenditure. The key to creating sustainable habitats is to minimize usage of energy and resources, thereby reducing waste generation and pollution, as byproducts of construction. So to conserve natural resources, by keeping the effects of global warming in mind, we can go for the green revolution technology for infrastructure. This modern green movement and the green rating systems are a consequence of the oil crisis of 1970s that inspired engineers, architects, environmentalists and ecologists to devise ways of reducing usage of energy and, consequently, the adverse impact on the environment.



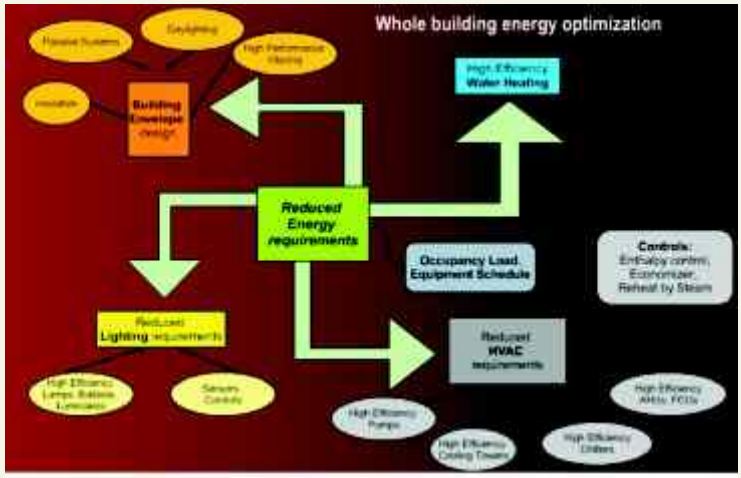
There are some principals which guide green infrastructure.

- ❑ Green infrastructure should be grounded in sound science and land-use planning theory and practice.
- ❑ Green infrastructure should be planned and protected before development.
- ❑ Green infrastructure is a critical public investment that should be funded up-front.
- ❑ Green infrastructure affords benefits to nature and people.
- ❑ Green infrastructure respects the needs and desires of landowners and stakeholders.
- ❑ Green infrastructure requires long-term commitment.

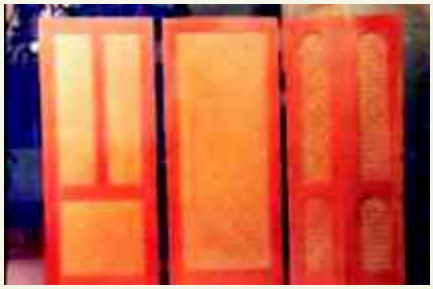
By preferring a green building to a conventional building, we help the planet and the people to retain nature to the maximum extent possible in three ways, with reference to the location of the buildings:

- ✔ Retain the external environment at the location of the building.
- ✔ Improve internal environment for the occupants.
- ✔ Preserve the environment at places far away from the building.

A green building is one that makes the greatest possible use of natural light and air, least possible utilization of energy and water. It emphasizes recycling of waste water, harvesting rainwater, least use of air conditioning, less production of carbon dioxide, and tries to safeguard the environment in every possible way. An integrated approach to building design means minimizing negative impacts of buildings on our fragile environment. A building should be designed as an integrated system that interacts with its surrounding environmental conditions by efficiently using valuable resources, and enhancing the user's comfort and productivity. Energy optimization of a building can be illustrated with the help of the following figure:



Green technology for Low-cost housing



The recent phenomenal rise in prices of building materials and costs of construction have stood in the way of providing low-cost houses for millions of people using conventional building materials. The appropriate way of developing low-cost dwelling units is to make best use of locally available material. Low-cost housing techniques can be achieved by replacing the conventional methods of planning and execution of building operations. No single approach and solution is available which will be acceptable in the whole country. The technique is to select on the basis of local climatic conditions and on the availability of local natural building materials/resources. There is an urgent need to develop new building materials and technologies for low-cost housing in rural areas.

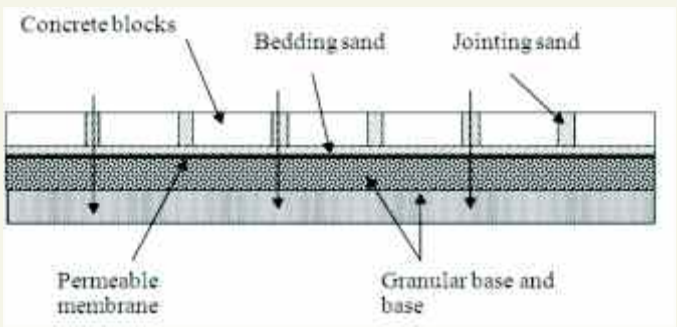
This necessitates the use of appropriate and cost-effective building materials and technologies in the construction of dwelling units. The use of bamboo as a reinforcing material after suitable treatment with cheaply available material like asphalt is one of the solutions for low-cost housing. The main problem with using bamboo as a reinforcement in place of steel is that it absorbs water and swells, and later on, when it dries, it reduces to its normal size, hence reducing the strength of the bond between bamboo and concrete. Treatment of bamboo with some waterproof coating makes bamboo less susceptible to moisture. Thus, negligible swelling and shrinkage of bamboo occurs during the curing period of concrete.

Green technology for Road Construction

Road construction technology needs changes to minimize damage to the environment of the earth. Aggregates are heated to temperatures between 1500C and 1800C for drying, proper coating and mixing with bitumen. Mixing temperature of bituminous mixes can be lowered by using foamed bitumen, bitumen emulsion, and some chemicals which reduce the viscosity of bitumen so that less fuel is used, with consequent reduction of greenhouse gases. Use of recycled plastic, recycled aggregates and municipal wastes will slow down the degradation of the earth. Pavements can be designed to help recharging of groundwater.

Municipal wastes consist of considerable amount of waste materials such as plaster, brick-bats, demolished concrete. They can easily be used as materials for widening of roads as well as new road construction. Some of the waste products from coal mining is highly variable, and sometimes may get ignited due to the presence of pyrites. If they are used deep in the embankment, there is little risk of combustion, due to the too low air content that would allow combustion.

All footpaths, parking yards, roads of residential areas and other low volume roads can be made permeable so that rain water enters into the pavements and then slowly drips into the groundwater. This will also eliminate splashing of water when a car moves during light rains. The most appropriate type of pavement is a pre-cast concrete pavement. For low volume roads, the sub-base and base layers must be open graded granular layers which have good permeability. Treatment with cement or bitumen can enhance the strength of the granular layers for heavy traffic.



Low-Carbon Building

The discovery of natural inorganic binders like pozzolanic materials resulted in lime-pozzolana (LP) cement, and this paved the way for the invention of Portland cement in 1824. Portland cement and steel brought revolutionary changes in the construction practices in the early part of the twentieth century. Later on, plastics and plastic products entered the construction industry. As we moved away from zero energy materials to more modern materials for construction activities, it became imminent to spend more energy and natural resources. These modern materials are energy-intensive and are hauled over long distances before being used for construction. In the context of carbon emission reduction and the issue of global warming, there is a need to pay attention to the use of modern building materials, with reference to (i) energy intensity of materials; (ii) natural resources and raw materials consumed; (iii) recycling and safe disposal; and (iv) impact on environment. Indiscriminate use of natural resources and an energy-intensive process for the building materials will not lead to sustainable options. Brief details of some low-carbon building materials and techniques are discussed below:

BLENDED CEMENT- These are cements containing a high volume of one or more complementary cementing materials (CCM), such as coal fly-ash, granulated slag, silica fume, and reactive rice-husk ash. A large volume of CO2 is directly emitted during the cement manufacturing process (0.9 tonnes/tonne of clinker). Reduction in the quantity of clinker by substituting with CCM results in fewer CO2 emissions.

STABILIZED MUD BLOCK FOR MASONARY- Stabilized mud blocks (SMB) are energy efficient eco-friendly alternatives to burnt clay bricks. These are solid blocks manufactured by compacting a mixture of soil, sand, stabilizer (cement/lime) and water. After 28 days' curing, these blocks are used for wall construction. The compressive strength of the block greatly depends upon the soil composition, density of the block, and percentage of stabilizer (cement/lime). Major advantages of SMB are: (a) energy efficient, do not require burning; 60–70% energy-saving when compared with burnt clay bricks; (b) decentralized production, production on site is possible; (c) utilization of other industrial solid wastes like stone quarry dust, fly-ash, etc.; and (d) easy to adjust the block strength by adjusting stabilizer content.

COMPACTED FLY-ASH BLOCKS- A mixture of lime, fly-ash and stone crusher dust can be compacted into a high-density block. Lime reacts with fly-ash minerals, forming water insoluble bonds, imparting strength to the block. Some advantages of the technology are: (a) decentralized production in tiny-scale industries; (b) utilization of industrial waste products; and (c) energy-efficient and environment-friendly.

RAMMED-EARTH WALLS - Rammed earth is a technique of forming solid walls by compacting processed soil in progressive layers in a temporary formwork. There are two types of rammed-earth constructions: stabilized rammed earth and unstabilized rammed earth. Unstabilized rammed earth is made mainly from soil, sand and gravel, whereas stabilized rammed earth contains additives like cement or lime in addition to soil, sand and gravel. Some of the advantages of rammed-earth construction include: (a) low energy intensity; (b) materials used are recyclable, and the bulk of the materials are locally available; (c) rammed earth offers a wide variety of textures and finishes; (d) flexibility in plan forms for the buildings; and (e) strength and wall thickness can easily be adjusted in case of stabilized rammed-earth walls.

Green technology for an Eco-friendly house

LEGEND :
1. SHADED CAR PARKING
2. GRASS PAVED CAR PARKING
3. TREES SHADING THE CAR PARK AS WELL AS THE BUILDING
4. BICYCLE PARKING
5. OUTDOOR LIGHTING ON RENEWABLE ENERGY
6. NATIVE SHRUBS
7. ECBC COMPLAINT GLAZING
8. SHADING DEVICES FOR COMPLIANCE WITH ECBC SHADING COEFFICIENT FOR GLASS
9. CONSOLIDATED PEDESTRAIN WALKWAY AND UTILITY CORRIDORS
10. PERGOLA SHADING HARD PAVED SURFACES
11. SOLAR WATER HEATER
12. SOLAR PHOTOVOLTAIC

Buildings are one of the major consumers of energy, and are the third largest consumers of energy after industry and agriculture. Buildings annually consume more than 20% of the electricity used in India. Awareness about the impact of depletion of fossil fuels and of global warming has led to renewed interest in green technologies.

An eco-friendly house uses the naturally available resources. The house can be built in such a way that it can use the naturally available light and ventilation. The openings can be placed in the south-west, which will provide better ventilation. Windows can be placed considering cross ventilation. Wind breakers can be provided for windows facing west, which will guide more air into the house. Higher ceilings can be provided than the conventional ones, which will give relatively cooler air in the living area. If the built-up area is less, then more space will be available around the building for air circulation.

Solar panels can be installed, which will reduce the burden on the electricity consumption. A solar system can be used for the cooking of food as well as water-heating. This will reduce the consumption of electricity or LPG. Implementation of a rainwater harvesting system can be beneficial in many ways. A few of them are:

i) Independent and ample supply of water in the dwelling.

ii) Water received is free of cost. Use of this water significantly reduces water bills for purchased water from the municipal supply.

iii) Costs incurred for purifying the water for potable use are nominal.

iv) For users located in rural areas, an independent supply of water avoids the cost of installing a public water supply system.

v) Rainwater harvesting lessens local soil erosion and flooding caused by rapid runoff of water from impervious cover such as pavements and roofs.

vi) The same water can be used for flushing and gardening purposes as well.

Customized Salary Structure: Magnet for Prospective Employees

Dr Charu Shri
Associate Professor, SOM

In today's competitive environment where attracting talent is a paramount concern for organizations, flexibility in salary structure can give an edge while negotiating with prospective employees. In flexible salary structures, employees are allowed to customize their pay by keeping the same Cost to Company (CTC). In this new HR practice, the companies offer their respective employees a chance to decide the structure of their salary package, while the CTC remains the same.

In today's scenario, where organizations are looking to create a competitive advantage to attract talent, and going for employer branding, flexible salary can be one of the best HR practices. It is a USP for those companies who have adopted it.

This flexible salary scheme will not only attract and satisfy employees, but will also retain them longer by offering attractive CTC, and allowing them to receive the remuneration the way they want. A diversified talent pool is a challenge which companies are facing. As every employee has a different life-style, age, desired lifestyle, gender, marital status, etc, so the way he or she wants to spend money is also different. The employer can become employee-friendly by giving the employees the choice to choose the elements of their salary.

The familial conditions of the employee are significant in choosing flexible benefits. For example, trade in some holidays in exchange for pay may be done by someone who is concerned in earning as much money as possible, whereas purchasing additional holidays or exchanging pay for childcare vouchers may be done by someone with young children. Employees can exchange different parts of their rewards, like childcare vouchers can be issued as an option to a component of pay. Employees of diverse demographic profiles in the organization desire different salary compositions, so the company may make an to offer them to design it on their own.

This new HR practice may become widely accepted, as many benefits are attached with it. This practice is helpful in creating a centre of attention for new talents and in maintaining the existing recruits. This system also helps employees to work out their tax payments, and helps in the development of the organization by showing a reduction in attrition rate. It assists the company in keeping its employees happy by giving them the freedom to design their own salary structure.

Cost-to-company (CTC) is fixed by the employer, but employees are given a free hand to make a decision regarding the elements they would like to have as part of their salaries. Tata Consultancy Services (TCS), Procter & Gamble India (P&G), Marico, Asian Paints, etc., launched this HR practice successfully under different terms. 'Bouquet of Benefits' by Tata consultancy services (TCS), 'My Pay, My Choice' by Procter & Gamble India (P&G), 'Flexi Menu' by Marico, and 'Flexi Grade Allowance' by Asian Paints are the terms given by them to this HR practice.

At present, few companies are following this practice, but it may show an upward trend in the future. Different generations of people work in a company, so choice is critical. Youngsters might prefer to work in an environment which offers them choice, even in the way their salary is structured. Some people see value in taking a certain amount of cash and keeping the rest in a company fund which generates its own benefits. So companies should give them a choice.

At TCS, employees are allowed to design their salary structure twice a year. Some employees cap the amount on food vouchers and pass on the rest to other benefits. The flexible-benefit plan aids employees in working out their tax payouts. This practice is being used at TCS for the last seven years to attract new recruits as well as to retain the existing talent. The flexible-compensation model helps to keep up steady growth in an industry.

In the 'Flexi Grade Allowance' system of Asian Paints, employees have the option to design certain allowances to suit their lifestyle, while CTC is fixed and benchmarked against the market. Employees had positive response towards this model. Some young employees choose more cash in hand as they may want to spend more as disposable income, while some preferred to have a lump-sum at the end of the year.

The implementation of a flexible salary structure may be time-consuming and call for in-depth financial knowledge. Employee benefits consultants are often used to determine the possible take up, and support in the implementation.

Flexible salary structure can be used as a hook to hire and to negotiate with prospective employees. Employees will have reasons to stay in a company when they get an attractive pay-packet and as much tax exempted as possible. Employees want to optimise the balance in their bank, just like employers look at optimizing profits. When the employee is happy, profit will come automatically.

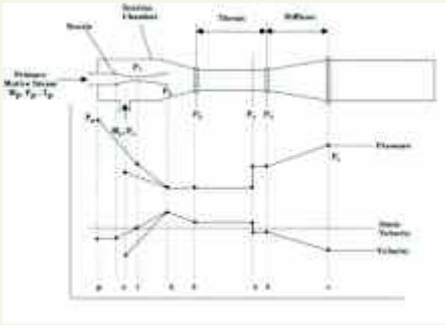
Environment-friendly Refrigeration

Priyank Sinha
Mechanical Engineering

Ever since the enforcement of the Montreal protocol to ban the use of CFC (chloroflouro carbons) in the 1990s, environmental concerns took a back seat for the refrigeration systems. This was essentially done to mitigate the ozone depletion which was brought about by the use and subsequent discharge of these refrigerants in the atmosphere. Use of CFC was replaced by newly developed HFC (hydroflouro carbons) which had little detrimental effect on the ozone layer when discharged in the atmosphere. However, quite recently, environmental concerns are again gaining momentum against the use of refrigerants in the light of greenhouse effects that these refrigerants are producing. This sector accounts for about 15% of the world's electricity consumption. Vapour compression systems employed in automobiles run with an efficiency of about 23%. This accounts for a large amount of fuel wastage to keep the refrigeration system in operation. The case is the same with the refrigeration units installed for domestic and industrial purposes. It is observed that any attempt to bring down the emission of any of these global warming stimulants brings down the efficiency of the refrigeration system, which in turn requires larger amount of fuel to be burnt, thus keeping the net effect the same. Today, industry is facing tremendous pressure to curtail the emission of greenhouse gases and improve the efficiency of the refrigeration plants in operation. Hence, the present thrust in research in this sector leading to the development of novel methods of refrigeration and modification of the existing ones to improve the efficiency of the system. Here in this article, we discuss one such upcoming technology whose commercial use is not fully tapped.

Ejector Expansion Refrigeration Cycle

EERC is a modified form of the standard vapour compression cycle which uses an ejector to recover the work which is lost in the expansion valve. This cycle was developed by DENSO. Refrigerators working on this modified cycle are thermodynamically more efficient. It increases the efficiency of the system by more than 50%, leading to a 70% reduction in refrigerant emissions, and a 60% reduction in carbon dioxide emissions.



Diagrammatic representation of the working of the ejector is shown here. It chiefly comprises three [four?] sections:

1. Nozzle – Primary high pressure fluid is entered in the nozzle. The velocity of the primary fluid is increased, and it gradually becomes supersonic. This happens at the expense of reduction in pressure. As a result, the refrigerant is sucked from the evaporator, which is regarded as the secondary fluid.
2. Mixing section – Both primary and secondary fluids are mixed in this section.
3. Diffuser – In this section, the pressure of the fluids is increased by the diffuser action at the expense of the speed. There is a pressure drop experienced at the inlet of the diffuser.
4. Gas liquid separator – The output of the diffuser is essentially the mixture of the liquid refrigerant and the gaseous refrigerant. The function of this unit is to separate from the liquid refrigerant from the gaseous one.

The replacement of the expansion valve by the ejector serves various purposes, some of which are discussed below:

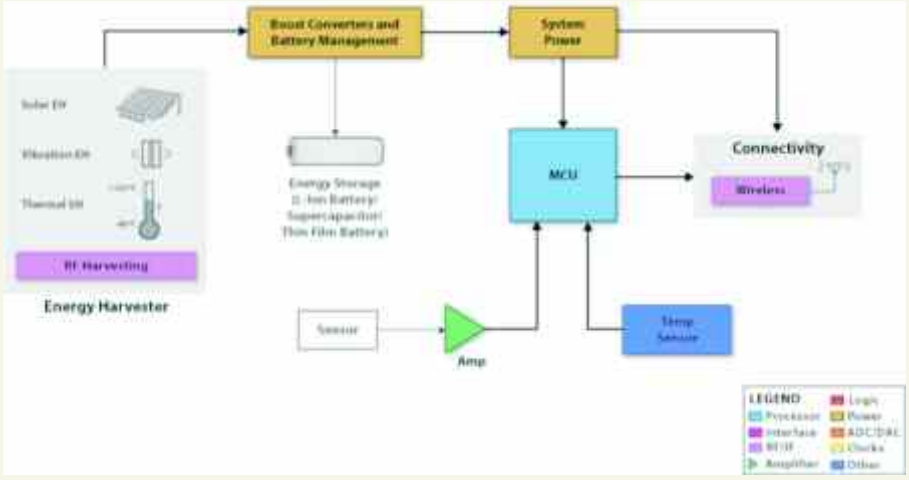
- A lot of energy is dissipated in expanding the refrigerant in the expansion valve due to the formation of eddies and swirls. This loss of energy does not take place in the ejector.
- Vapour refrigerant is expanded in the diffuser before entering it in the compressor. Due to the diffuser action, refrigerant is partially compressed before entering the compressor and, hence, compressor work is saved. It increases the COP of the cycle.
- It further improves the heat exchange efficiency of the evaporator, as only liquid refrigerant is allowed to enter the evaporator unit.

Conclusion – Apart from the ejector expansion technology, various other technologies like magnetic refrigeration, and CO2 refrigeration are surfacing in an attempt to build a power efficient and environment-friendly refrigeration system. However, the commercial future of these systems is highly uncertain. These days, research is directed to alter and modify the basic cycle of operation for these systems.

Energy Harvesting System

Ms Charu Rana
Assistant Professor, EECE

Sources of Energy Harvesting



Energy harvesting is the process by which energy readily available from the environment is captured and converted into usable electrical energy. Energy harvesting has been around for centuries in the form of windmills, watermills and passive solar power systems. In recent decades, technologies such as wind turbines, hydro-electric generators and solar panels have turned harvesting into a small but growing contributor to the world's energy needs. Energy-harvesting devices efficiently and effectively capture, accumulate, store, condition and manage this energy, and supply it in a form that can be used to perform a helpful task.

This technology offers two signi?cant advantages over battery-powered solutions: virtually inexhaustible sources, and little or no adverse environmental effects. This essentially free energy source, when designed and installed properly, is available maintenance-free, and is now available throughout the lifetime of the application. Such systems can be more reliable than wall plugs or batteries. In addition, energy harvesting can be used as an alternative energy source to supplement a primary power source, and to enhance the reliability of the overall system and prevent power interruptions.

- Mechanical Energy – from sources such as vibration, mechanical stress and strain
- Thermal Energy – waste energy from furnaces, heaters, and friction sources
- Light Energy – captured from sunlight or room light via photo sensors, photo diodes, or solar panels
- Electromagnetic Energy – from inductors, coils and transformers
- Natural Energy – from the environment, such as wind, water flow, ocean currents, and solar
- Human Body – a combination of mechanical and thermal energy naturally generated from bio-organisms or through actions such as walking and sitting
- Other Energy – from chemical and biological sources.

Many real-life applications using energy harvesting system power are now practical. Wireless sensor network systems such as ZigBee systems often benefit from energy harvesting power sources. A wearable device is another major application, mainly used for wild animals.

Reference: Texas Instruments

An Energy Harvesting System consists of an Energy Harvester Module and a processor/transmitter block. The Energy Harvester module captures milli-watts of energy from light, vibration, thermal or biological sources. A possible source of energy also comes from RF, such as an emission from cell phone towers. The power is then conditioned and stored within a battery, an efficient quick-charging capacitor, or one of the newly developed thin film batteries. The system is then triggered at the required intervals to take a sensor reading, through a low power system. This data is then processed and transmitted to the base station. The end application can be a ZigBee-enabled wireless sensor network, or control and monitoring devices. This kind of EH

System eliminates the dependency of the system on battery power, and reduces the need to service the system.

The features of energy harvesting systems are:

- Ability to operate with lowest standby current to maximize storage of energy
- Consumption of lowest possible power when active
- Ability to turn on and turn off instantaneously
- Efficient operation with lowest duty cycle of active vs. standby modes
- Analog capability for sensor interfacing and measurements
- Ability to operate with a low voltage range
- Lowest leakage currents to maximize harvested energy

Our Other Publications :

Alumni Relations Office (ARO) of ITM University

ITM University has recently set up a full-fledged Alumni Relations Office (ARO) at its campus to look after the alumni affairs under the overall charge of Professor A K Yadav, as the Deputy Dean (Alumni).

This is a significant development with an aim to connect with a large community of nearly 5000 alumni and facilitate interaction between alumni and their alma mater.

ARO will be responsible for organizing various events and activities concerning alumni. Specifically, it would be organizing Alumni Meets and Annual Alumni Reunions at appropriate times of the year. **The first event to be organized by ARO is the Alumni Meet on 29 Dec 2012,** the details are being worked out. ARO will also be responsible for communicating news and updates by sending the mailers and newsletters periodically. Further, it is proposed to issue a lifetime email ID on ITM domain to every alumni. All these steps are aimed at increasing alumni engagement and fostering opportunities for alumni development. Alumni Relations Office will strive to work as a single (key) point of contact for ITMU alumni. As an illustration, alumni may contact various units/departments of ITMU through ARO for the following (but not limited to):

- *Request for Transcripts*
- *Involving students in projects*
- *Taking interns*
- *Availing/Hiring of facilities on campus*
- *Collaborating on projects with faculty*
- *Conducting Placement exercises*
- *Conducting contests/Organizing seminars, workshops etc.*
- *Sponsoring an event*

The ARO will facilitate on behalf of alumni with the concerned officials.

We need to leverage the strong alumni community and use it to create benefits for the fellow alumni and help strengthen brand ITMU. In this regard, the first major challenge is **to build a credible database of alumni. To meet this challenge, none other than our alumni can be as effective. In case, you could help in locating coordinates of some alumni, please do so by writing to Professor Yadav at *alumni@itmindia.edu.* Therefore, all concerned are requested to help us update the current email ID of ITMU alumni.** Your contribution in this effort will be greatly appreciated.

In order to create a network of alumni, one of the initial steps taken by ARO is the creation of an **official Linkedin account**. Now, we need alumni to connect to this and form a credible network of ITMU alumni community. Therefore***, those alumni who already have a Linkedin account are requested to connect to this. Otherwise, please create one and be a part of the ITMU alumni network on Linkedin.***

ARO would be glad to receive comments/suggestions/feedback at *alumni@itmindia.edu*

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